JVC

INSTRUCTIONS

GR-S707

CAMERA-RECORDER/PLAYER

MANUEL D'INSTRUCTIONS: CAMERA-ENREGISTREUR/LECTEUR GR-S707E
BEDIENUNGSANLEITUNG: KAMERA-RECORDER GR-S707E
MANUAL DE INSTRUCCIONES: CAMERA/GRABADORE GR-S707E
GEBRUIKSANWIJZING: KAMERA/RECORDER GR-S707E
BRUKSANVISNING: KAMERA BANDSPELARE GR-S707E
MANUALE DI ISTRUZIONI: TELECAMERA/REGISTRATORE GR-S707E

Specifically for the GR-S707E/AA-V6EG
Spécial pour le GR-S707E/AA-V6EG
Für modellasführung GR-S707E/AA-V6EG
Especialmente para la GR-S707E/AA-V6EG
Speciaal voor de GR-S707E/AA-V6EG
Speciellt avsedd för GR-S707E/AA-V6EG
Specifico per il GR-S707E/AA-V6EG

Super VHS
videomovie

S-VHS-C 625 VHS PAL

HQ High Quality

CCD Charge Coupled Device

AF AUTO FOCUS

Hi-Fi STEREO

YU30052-93

SAFETY PRECAUTIONS

WARNING:
TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

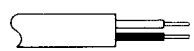
This equipment should be used with DC 9.6 V ⎓ only.
CAUTION:
To prevent electric shocks and fire hazards, do NOT use any other power source.

The AA-V6EG AC Power Adapter/Battery Charger should be used with 110 – 240 V∿, 50/60 Hz only.
Caution:
To prevent electric shocks and fire hazards, do NOT use any other power source.

IMPORTANT (IN the United Kingdom)
Mains Supply (240 V∿, 50 Hz only)

IMPORTANT

Do not make any connection to the Larger Terminal coded E or Green. The wires in the mains lead are coloured in accordance with following code:



Blue to N (Neutral) or Black
Brown to L (Live) or Red

If these colours do not correspond with the terminal identifications of your plug, connect as follows:
Blue wire to terminal cord N (Neutral) or coloured Black.
Brown wire to terminal coded L (Live) or coloured Red.
If in doubt – consult a competent electrician.
Note
We recommend that you should disconnect the AC cord from the outlet.

Warning on lithium battery
The battery used in this device may present a fire or chemical burn hazard if mistreated. Do not recharge, disassemble, heat above 100°C or incinerate.
Replace battery with Panasonic (Matsushita Electric), CR 2025; use of another battery may present a risk of fire or explosion.
- Dispose of used battery promty.
- Keep away from children.
- Do not disassemble and do not dispose of in fire.

CAUTION:
To prevent shock, do not open the cabinet. No user serviceable parts inside. Refer servicing to qualified personnel.

NOTES:
- The rating plate (serial number plate) and safety caution of the main unit are on its bottom.
- The rating plate (serial number plate) of the viewfinder is on its bottom.
- The rating plate (serial number plate) of the AC power adapter/battery charger is on its bottom.

The provided viewfinder is the VF-V707E. Do not use any other viewfinder with the GR-S707E.

This equipment has been produced to comply with Directive number 82/499/EEC.

S-VHS-C 625 VHS-C PAL

Cassettes marked "S-VHS-C" and "VHS-C" can be used with this VideoMovie. However, S-VHS recordings are possible only with cassettes marked "S-VHS-C".

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PRECAUTIONS

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For safety, strictly observe the following instructions.
- Do not disassemble or modify the unit.
- Prevent inflammables, water and metallic objects from entering the unit.
- Do not use the unit when there is lightning in the vicinity. Disconnect the power cable of connected equipment.

Avoid using the unit under the following conditions:
- Places subject to excessive humidity or dust.
- Near appliances generating strong magnetic or electric fields (speakers, broadcasting antennas, etc.).
- Places subject to soot or steam such as near a cooking stove.
- Places subject to excessive shock or vibration.
- Near a television set (rolling pictures or howling might result).
- Extremely hot places.

Do not expose the unit to high temperatures over 40°C for long periods.

If the unit should be subjected to direct sunlight, or left in a closed car in summer, or placed near a heater, the CCD and the auto-focus sensor may deteriorate and the cabinet may become deformed. Furthermore, this also may cause the transistors and other electronic and mechanical parts to malfunction. Remember the following:
- Do not leave the unit in places of over 50°C.
- Do not use the unit in places of over 40°C.
- Do not use the unit in places of below 0°C.
- Protect the unit from excessively dry or excessively humid conditions (below 35 % or above 80 % humidity).
- For long storage, select a place between -20°C and 30°C.

Take special care for protection of the unit.
- Do not allow the unit to become wet.
- Do not leave the unit in closed cars on hot summer days.
- Take special care not to drop the unit or strike it against hard objects. Protect from shocks during transportation.

Make it a rule to observe the following instructions.
- Do not remove the battery pack or disconnect other power supply units during recording or playback before sliding the POWER switch to OFF. If not observed, this will cause tape damage.
- When the unit is not in use, remove the battery pack.

Keep the lens and viewfinder eyepiece always clean.
- When the lens is dirty or dusty, blow it off first and then gently wipe with a soft brush or lens cleaning paper.
- The lens is likely to become moldy if left dirty.

Be careful not to damage the CCD.
- Do not keep the lens directed at extremely bright objects such as the sun or other light sources for long periods. Although the CCD is less susceptible to such burn than a tube would be, caution should be exercised when using this unit. Most importantly, the lens should be capped except while actually shooting.
- Do not direct the eyepiece of the viewfinder at the sun.

Auto-focus requires a bit of consideration.
- Do not touch the focus ring while the auto-focus mechanism is in operation as this could damage the auto-focus mechanism.
- When a filter or a special-effect lens is to be attached to the end of the lens, be sure to turn power off or switch from the Auto-focus mode to the Manual mode. NEVER attempt to attach a filter or lens while the auto-focus mechanism is operating as this will result in malfunctioning. (If a teleconversion or wide-angle conversion lens is attached, the auto-focus mode cannot be used.)

Handle the unit carefully.
- Protect the microphone from excessive shocks.
- Do not carry the unit by holding it only by the viewfinder.

Moisture condensation prevents use of the unit.
- You have observed that pouring a cold liquid into a glass will cause drops of water to form on the glass's outer surface. This same phenomenon occurs on the head drum of a video recorder when the recorder is moved from a cool place to a warm place, after heating in a cold room, under extremely humid conditions or in a place directly subjected to the cool air from an air conditioner.
- Moisture on the head drum can cause severe damage to the video tape, and can lead to internal damage to the recorder itself.
- If moisture condensation occurs on the head drum, a condensation warning appears in the recorder LCD and the unit enters the Stop mode, unable to function. In such a case, wait for a few hours until the indicator disappears.

Maintenance
- When the cabinet is dusty, clean by gently wiping with a soft cloth.
- Avoid the use of strong cleaning agents such as benzene or alcohol as they may damage the cabinet.
- Cleaning should be done only after the battery pack has been removed or other power units have been disconnected.

Serious malfunctioning

If malfunctioning occurs, stop using the unit immediately and consult your local JVC dealer.

FEATURES

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Professionally-Oriented Design

- Maximum creative opportunity is made possible by providing both Super VHS and Hi-Fi stereo sound together with complete manual control of several functions, as well as allowing comprehensive interfacing with a wide variety of components.
- Standard-size 62 mm TS (Tape Stabilizing) head drum.

Super VHS

- Super VHS provides the best pictures ever available in a compact VideoMovie. Horizontal resolution and colour are superior, dubbing results are outstanding.
- Y/C (luminance/chrominance) separated Out connector for retaining maximum picture quality.
- Results are superb using the GR-S707E as a go-anywhere unit for live-action recording.
- The GR-S707E can also be used to record in VHS or play back VHS recordings as well.

Hi-Fi Stereo Sound

- A first for compact VideoMovies, it conforms to the Hi-Fi VHS standard with a dynamic range of 80 dB and frequency response from 20 to 20,000 Hz.
- Hi-Fi recording level controls with peak-hold level indicator and ALC On/Off switch for manual or automatic setting as desired.
- Built-in unidirectional stereo microphone.
- Audio Line Inputs for connection to optional amplifiers or mixing equipment equipped with specialized microphones.

Consistent Picture Quality

- Super Double-Azimuth 4-head system for optimum performance in both SP and LP modes as well as slow-motion, still, frame advance, and variable-speed search.
- Flying erase head for glitch-free assemble and insert editing.

VHS HQ System

- HQ (High Quality) System circuitry comprising a luminance noise reduction circuit (YNR), a detail enhancer (DE), and a higher white clip level (WCL) for better VHS recording results.

Additional Features:

Shooting

- Super-high-resolution 1/2" field-storage-type CCD with 420,000 pixels (total).
- F1.2, two-speed 8x power zoom lens with macro position.
- Time-lapse, Animation, and Self-timer functions.
- Multiple-speed electronic shutter 1/50, 1/250, 1/500, and 1/1000-sec. for sharp, clear special-effects VCR playback.
- 8-lux low-light sensitivity for superior results even in candlelit scenes.
- Full-auto operation with manual overrides: manual iris; iris lock with F-stop indication, white balance lock; and AGC on/off.
- TCL* Image Sensing auto-focus system with manual override.
- Trigger-linked audio/video fader smooths scene-to-scene transitions with professional-looking fade-ins or fade-outs.
- Backlight compensation (BLC) for difficult lighting situations.
- Remaining tape time indication with tape-end warning.
- Quick Review function and Retake functions.
- Time counter.
- One-shot time counter.
- Twin-trigger system for comfortable shooting in any position.
- Tally lamp (on/off switchable).

Versatility and Editing

- Flying erase head.
- Insert editing and Audio dubbing.
- Master Edit Control system allows control of VideoMovie and attached designated JVC VCRs using GR-S707E's controls alone.
- Dubbing mode switch for best possible dubbing results.
- VHS Index Search System (VISS) (only manual marking).
- Exclusive S-VIDEO Out, A/V Out and Audio Line Input connectors.
- Variable-speed search.
- Stills and slow-motion playback.
- Adjustable electronic viewfinder with comprehensive indications and built-in diopter.
- Date/time recording for convenient cataloguing of events.
- Three-way power supply flexibility: battery pack, AC adapter, or car battery via lighter socket.
- Optional remote control unit (RM-V15U).

Ease-of-Use

- One-button full-auto operation of focus, exposure, and white balance.
- Image Sensing autofocus effective for most subjects even through water or glass.
- Dual LCD panels for visual checking of operating modes at a glance.
- Automatic Colour Tracking white balance adjustment for natural colours indoors and out.
- Trigger alarm gives audible warning of recording start/stop operaitons.
- One-button recording standby mechanism.
- Only 2 kg.

* A registered trademark.

The GR-S707E is designed to be used with PAL-type colour television signals. It cannot be used for playback with a television of a different standard. However, live recording and viewfinder playback are possible anywhere. Use the BN-V66RU/BN-V77RU battery packs and, to recharge them, the provided multivoltage AC power adapter/battery charger. (An appropriate conversion adapter may be necessary to accommodate different designs of AC outlets in different countries.)

VIDEO CASSETTES

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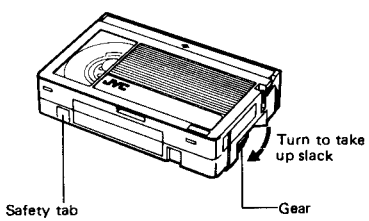
- The GR-S707E employs only the cassettes carrying the respective S-VHS and the VHS C marks.
- Recording onto prerecorded tapes automatically erases the previously recorded video and audio signals.
- An inverted cassette cannot be inserted.
- Do not load and unload the cassette repeatedly without allowing the tape to run at all. This will slacken the tape and thereby damage it.
- Make certain before loading the cassette that the tape is not slackened. If there is any slack, turn the gear on the cassette in the direction of the arrow to take up slack.
- The cassette is equipped with a safety tab to prevent accidental erasure. When the tab is removed, recording is impossible. If you wish to record on a cassette whose tab has been removed, use adhesive tape to reseal the slot.
- To avoid excessive exposure to dust and fingerprints, do not open the front tape cover.

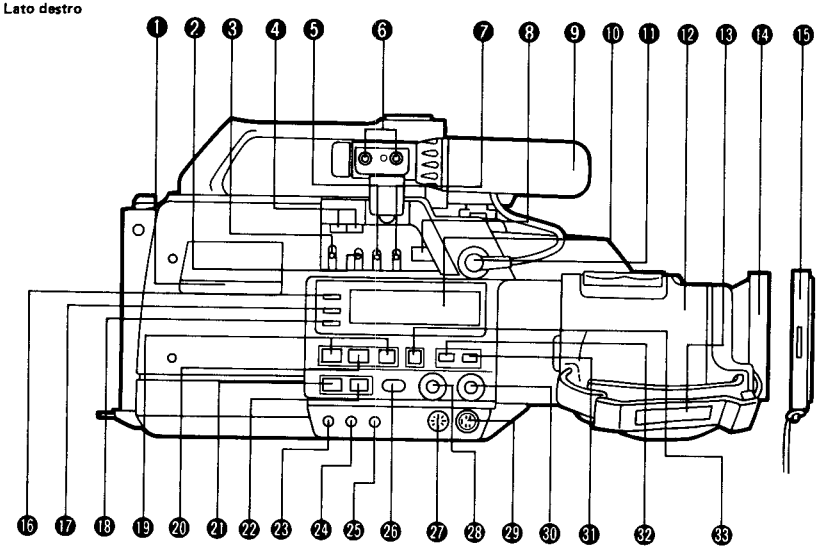


Storage of cassettes

- Avoid exposing the cassettes to direct sunlight, Keep them away from heaters.
- Avoid storing the cassettes in humid or dusty places.
- Do not drop the cassettes. Do not expose them to violent vibrations or shocks.
- Do not expose the cassettes to strong magnetic fields (near a motor, transformer or magnet).
- Place the cassettes in cassette cases and position them vertically.

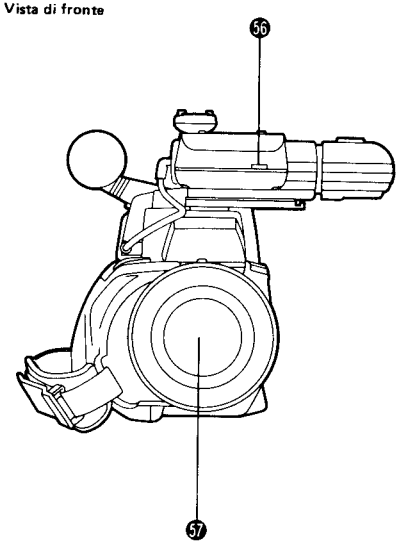
Right side

Côté droit
Rechte Seite
Vista del lado derecho
Rechterkant
Höger sida
Lato destro



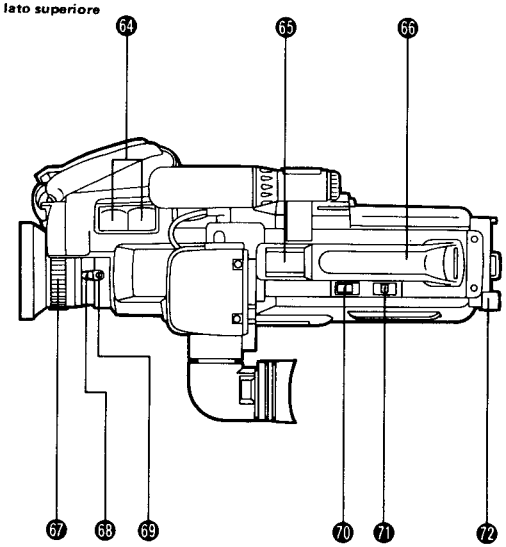
Front view

Vue de face
Vorderansicht
Vista frontal
Voorkant
Sedd framifrån
Vista di fronte



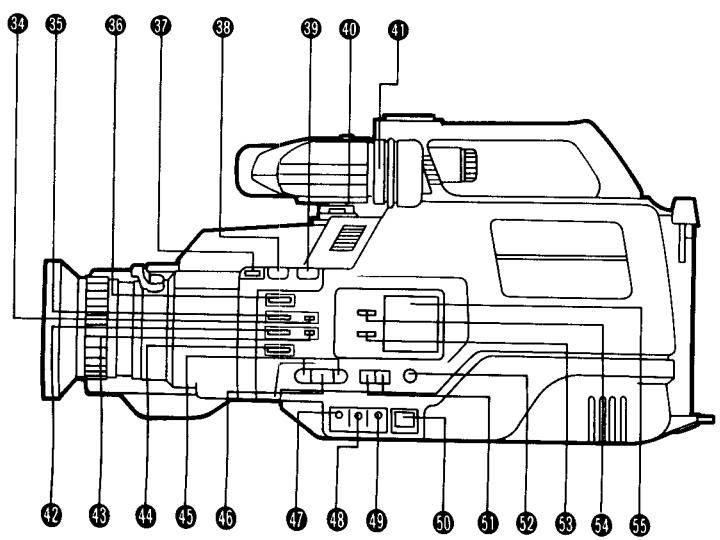
Top view

Vue de dessus
Draufsicht
Vista superior
Bovenkant
Sedd ovanifrån
Vista del lato superiore



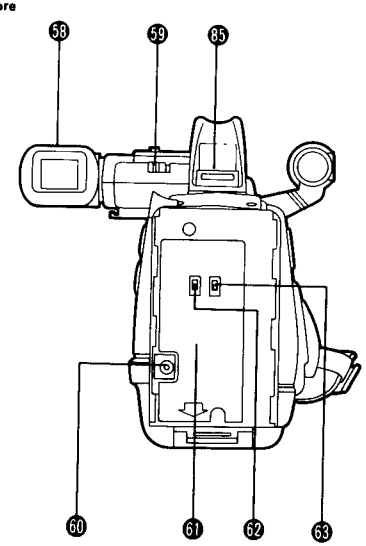
Left side

Côté gauche
Linke Seite
Visa del lado izquierdo
Linkerkant
Vänster sida
Lato sinistro



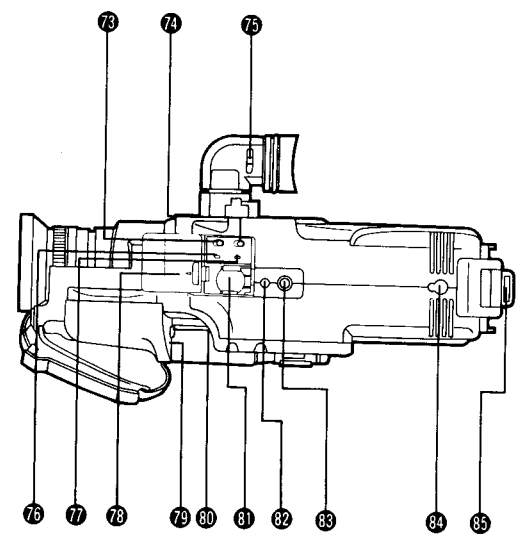
Rear view

Vue arrière
Rückansicht
Vista posterior
Achterkant
Sedd bakifrån
Vista del lato posteriore



Bottom view

Vue de dessous
Unteransicht
Vista inferior
Onderkant
Sedd underifrån
Vista del lato inferiore



CONTROLS AND CONNECTORS

Refer to the diagrams on the front foldout page.

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Right Side

❶ **Cassette holder**

❷ **DUBBING MODE switch**
Normally set to OFF. For making multi-generation dubs, set to ON.

❸ **AUDIO OUT select switch**
Selects the audio track(s) to be listened to. This switch is effective for all audio output connectors (PHONES and AUDIO OUT).
NORM: to listen to the sound on the longitudial (normal) audio track.
MIX : to listen to the mixed sound on the Hi-Fi and normal audio tracks (for example, to enjoy Hi-Fi audio while at the same time listening to a narration dubbed onto the normal audio track).
Hi-Fi : to listen to the sound on the Hi-Fi audio track.

❹ **TRACKING -/+ buttons**
If noise bars are seen, or Hi-Fi audio distortion is sensed during normal playback, minimize them by pressing either button. The tracking is reset to normal when both buttons are pressed at the same time, a cassette ejected, or the power turned off. In the fast-speed search mode, use these buttons to vary the search speed in either direction.

❺ **REC MODE select switch**
Set to SP to record at standard tape speed. Set to LP to record at a slower tape speed, allowing an extended recording time of up to one hour with an SE-C30 videocassette.

❻ **MIC jacks**
For the connection of external microphone.
MONO: Use to connect a monaural microphone.
STEREO: Use to connect a stereo microphone.

❼ **ALC switch**
Set to AUTO to activate the automatic level control circuit for Hi-Fi audio. For manual control of the Hi-Fi audio recording level, set this switch to OFF and use the Hi-Fi REC LEVEL control knob ㉚ for adjustment.

❽ **EDIT button**
When dubbing from the GR-S707E to a designated JVC VCR, pressing this button starts the GR-S707E for playback and, in synchronization with it, the VCR for recording.

❾ **Stereo microphone**

❿ **LCD panel for operation of recorder section.**
See page 11.

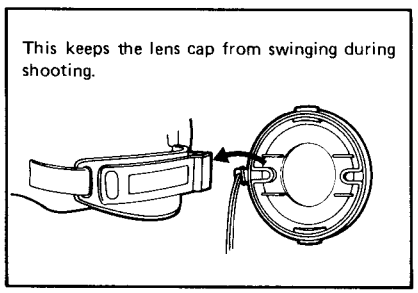
⓫ **Electronic viewfinder connector (EVF)**

⓬ **Lens grip**

⓭ **Grip strap**

⓮ **Lens hood**
Standard 72 mm lens filters can be attached to the lens hood. With the lens hood removed, 52 mm filters can be attached.

⓯ **Lens cap (White balance cap)**
Can be secured by inserting its protrusion into the slot of the strap's buckle.
Can be used for the white balance lock. See page 25.



⓰ **COUNTER/REMAIN button**
Selects the mode of the tape counter.

⓱ **Counter MEMORY button**
Press this button after resetting the counter to "+00M 00S" at a point on the tape to be located later. "MEMORY" appears on the LCD panel and the tape will then stop automatically at the counter reading of around "+00M 00S" during rewind or fast forward.

⓲ **Counter RESET button**
Press to reset the realtime tape counter to "+00M 00S".

⓳ **REW/FF (SHUTTLE SEARCH) buttons**
Press in the Stop mode for rewind or fast forward. Press in the Play mode for search at 7 times normal speed in either direction.

⓴ **PLAY button**
Press to play back the tape or cancel the Pause/Still mode. Also use this button together with the REC button ㉖ for recording, or with the AUDIO DUB button ㊱ for audio dubbing.

㉑ **PAUSE/STILL button**
Press to view a still picture during playback, or to stop playback temporarily. Each time this button is pressed, the still picture will advance slightly.

㉒ **STOP button**
Press to engage the Stop mode.

㉓ **PHONES jack**
Connect provided stereo earphones for monitoring the sound during recording.

㉔ **REMOTE jack**
For the connection of the optional RM-V15U remote control unit.

㉕ **AUDIO IN terminal**
Connect an audio source for mixing the microphone input when recording or audio dubbing.

㉖ **REC button**
Press to engage the Record Standby mode. To start recording, press the main recording start/stop button ㉚ or second recording start/stop button ㊲ .

㉗ **AV OUT terminal**
Using the AV/S output cable (provided), connect this terminal to another VCR for dubbing or editing (using the Master Edit Control function).

㉘ **Hi-Fi REC LEVEL BALANCE control knob**
This control adjusts the L and R channels relative to each other. Turn counterclockwise to boost the Hi-Fi audio left-channel recording level; clockwise to boost the right-channel recording level.

㉙ **[S] OUT terminal**
Using the S-VIDEO cable (optional), connect this terminal to another video recorder or monitor equipped with an S-VIDEO IN terminal for dubbing or monitoring.

㉚ **Hi-Fi REC LEVEL control knob**
Turn the control referring to the audio level indicators on the recorder section LCD panel ⑩ . When the indicators light up to or near 1 dB for the loudest input signal, the recording level is optimum.

㉛ **INSERT button**
Press for insert editing. See page 37.

㉜ **AUDIO DUB button**
Press this button together with the PLAY button ⑳ for audio dubbing. See page 38.

㉝ **SLOW button**
Press while in the Play mode to engage the Slow-Motion mode. The playback speed will slow down.

Left Side

㉞ **White balance LOCK button**
Press while in the Auto White Balance mode to lock the automatically adjusted white balance setting.

㉟ **W.BALANCE select button**
The white balance setting is manually selectable using this button.
☀ : Halogen or tungsten lighting.
▭ : Fluoresent lighting.
☀ : Daylight.

㊱ **FOCUS button**
Press once for automatic focus, and press again to focus manually. "AUTO" or "MANU" appears respectively on the LCD panel ㊺ . See page 26 and 27 for manual focus indications.

㊲ **Second recording start/stop button (SUB TRIGGER)**
Functions exactly as the main recording start/stop button ㉚ . Use for low-angle shots when recording with the camera held low.

㊳ **FADER button**
To prepare a fade out of the picture to a black blank screen, press this button, then press either recording start/stop button ㉚ or ㊲ to start fading out. To fade in from a black blank screen, press this button, then press the recording start/stop button to start fading in.

㊴ **BLC button**
For backlight compensation, press this button. While it is being pressed, the iris is 1 – 2 f-stops wider than the automatic setting.

㊵ **Viewfinder holder**

㊶ **Electronic viewfinder**
For monitoring the scene being shot or the playback picture after recording. Several indicators are included, as well as the date/time or one-shot time if selected.

㊷ **DISPLAY ON/OFF button**
Press to record the displayed date, time, or date and time. Recording continues until this button is pressed again. Note that when the auto-date-record function has been chosen using the DISPLAY SELECT button ㊸, the date will be briefly recorded regardless of this button's setting.

㊸ **DISPLAY SELECT button**
Press this button to select the date/time display. It cycles through the modes in the following order:

Date/time display → Date display → Time display → AUTO DATE record reserve → On-screen display → (back to Date/time display)

The auto-date-record function automatically displays and records the date for 5 seconds upon turning on the power and beginning recording. Before recording begins, this mode is indicated in the viewfinder by "AUTO DATE".

㊹ **MONITOR button**
Press to engage the Rehearsal mode. See page 23.

㊺ **RETAKE R/F buttons**
Press either button (R for reverse, F for forward) while in the Recording Standby mode to reach the point where you wish a new recording to start. When the button is released, the camera will enter the Recording Standby mode.

㊻ **QUICK REVIEW button**
If you want to review the end of the previous recorded segment for confirmation, press this button from the Record Standby mode. See page 22.

㊼ **AGC button (Automatic Gain Control)**
Alternates between the AGC Auto and AGC Off (indicated in the viewfinder) modes. In the Auto mode, the AGC circuit will automatically start operation if illumination is insufficient.

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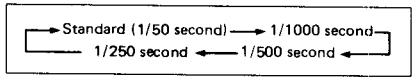
㊽ SHUTTER speed select button
Press to switch the shutter speed. Each pressing selects the speeds in the following order.



㊾ Index button (VISS)
Press while recording to put an index code on the tape for later reference. See page 28.

㊿ FULL AUTO button
Pressing this button puts the focus, iris, AGC, and white balance under automatic control and selects the standard shutter speed. Auto-focus can be cancelled by pressing the FOCUS button; auto white balance can be cancelled by pressing the W. BALANCE button ㊺ ; auto iris can be cancelled by pressing either MANU IRIS button ㊶ ; AGC can be cancelled by pressing AGC button ㊼ to off, the high-speed shutter can be selected by pressing the SHUTTER speed select button ㊽ . Pressing the FULL AUTO button in the Full-auto mode has no effect.

(51) APERTURE-MANU IRIS -/+ buttons
The iris setting can be compensated (or varied) allowing more image expression. Press "+" button to overexpose the picture, "–" button to underexpose the picture. Each pressing of the button opens (closes) the aperture.

(52) AUTO/MANUAL button
Press to enter the Iris Lock mode for maintaining the current iris setting. The Iris Lock mode can be cancelled by pressing the AUTO/MANUAL button again.

(53) INTERVAL button
Press while in the Recording Standby mode for self-timer recording. Initial setting is 15 seconds. Available time settings are 15 sec., 30 sec., 1 min., and 3 min. Pressing the button again after 3-min. setting, the Self-Timer mode is cancelled. Use this button in combination with the REC TIME button ㊹ for time-lapse recording; select the interval with the INTERVAL button and the recording time with the REC TIME button. Modes and settings will be indicated on the LCD for camera operation.

(54) REC TIME button
Press while in the Recording Standby mode for animation recording. Initial setting is 1/4 seconds. Available time settings are 1/4 sec., 1/2 sec., and 1 sec. Use this button in combination with the INTERVAL button for time-lapse recording.

(55) LCD panel for operation of camera section
See page 12.

Front View

(56) Tally lamp
Lights to show when recording is in progress, if the TALLY switch (58) is in the ON position.

(57) 8 : 1 power zoom lens
F/1.2, f = 9 – 72 mm, filter diameter: 52 mm.

Rear View

(58) Eye cup

(59) TALLY ON/OFF switch
Set to ON if tally indication is required.

(60) DC INPUT terminal
For operation with external power supply via the AC power adapter or car battery adapter.

(61) Power unit mount

(62) S-VHS recording mode select switch
Set to ON-AUTO to automatically select (detect) the mode according to an inserted cassette (S-VHS mode for S-VHS-C cassette, VHS mode for VHS-C cassette); set to OFF to record in the VHS mode regardless of type of cassette.

(63) VIDEO OUT switch
Select the signal output via AV OUT connector (27) .

Y/C: Set to this position to supply an S-VHS signal (Y/C separated video signals) to a component connected to the AV OUT connector.

CVBS: Set to this position to supply an ordinary video signal (composite video signal) to a component connected to the AV OUT connector.

Top View

(64) Power zoom buttons (W/T)
For automatic zooming at slow speed, press lightly. For regular speed zooming, press firmly. "T" is for telephoto zooming and "W" is for wide-angle zooming.

(65) Accessory shoe
Use this accessory shoe to attach an optional shoe adapter which allows attaching a variety of optional accessories.

(66) Carrying handle

(67) Focus ring

(68) Manual zoom lever
Use to turn the zoom ring manually.

(69) Macro button
Turn the zoom ring while pressing this button to enter Macro Shooting mode.

(70) POWER switch
Slide to turn the power on. The Stop indicator appears on the LCD panel. Slide again to switch off power.

(71) EJECT switch
Slide to open the cassette holder.

(72) BATTERY RELEASE lever
Press down till it locks in place to remove the attached battery.

Bottom View

(73) ONE-SHOT TIME COUNTER switch
Set to ON to obtain a one-shot time counter indication on the viewfinder screen.

(74) ALARM switch
Set to ON to activate the trigger alarm system. An electronic alarm will beep once when the recording start/stop button is pressed to begin recording, and twice when it is pressed for record pause. This alarm helps prevent recording errors.

(75) Dioptric adjustment control
Adjusts the viewfinder lens to suit the operator's eyesight.

(76) DATE/TIME SELECT button
Use to select the portion of the clock or date settings to be changed. Cycles through the day month, year, hour, and minute settings. To end adjustment, press once after selecting the minute portion.

(77) DATE/TIME SET button
Use to set the built-in clock and date function.

(78) Clock battery compartment cover

(79) Thumb rest
Place your thumb on this grooved area next to the recording start/stop switch between switch operations.

(80) Recording start/stop button
Press this button in the Recording Standby mode to start recording. Pressing it again re-engages the Recording Standby mode.

(81) Clock battery compartment
Holds the lithium battery (CR2025 or its equivalent) that powers the clock for date and time function. See page 31.

(82) Forward stud hole

(83) Tripod mounting socket

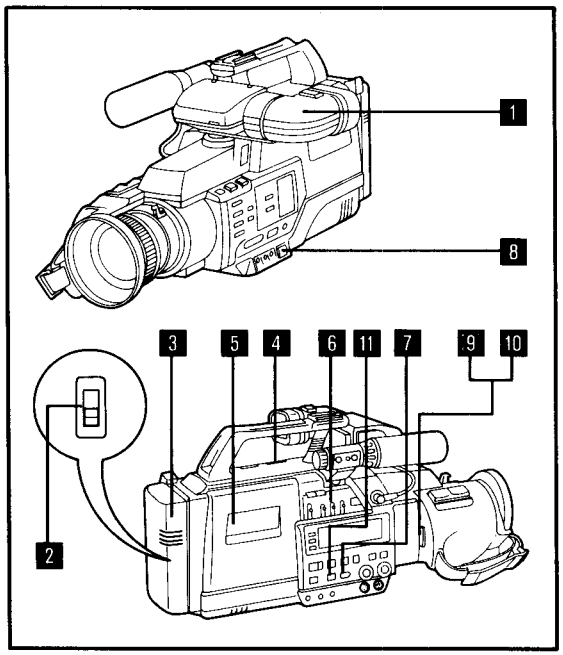
(84) Rear stud hole

(85) Eyelet for attaching the shoulder strap

LIVE RECORDING HAS NEVER BEEN SO EASY

ENGLISH

Full-auto outdoor recording procedure

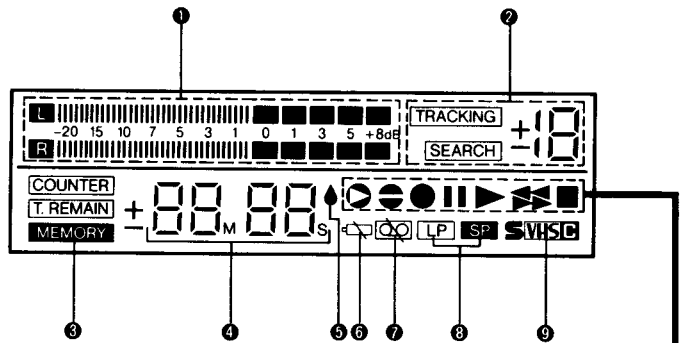


1. Adjust the viewfinder. (Refer to page 18 for details.)
2. Set the S-VHS switch. (Refer to page 15 for details.)
3. Attach the battery pack. (Refer to page 19 for details.)
4. Slide Power switch to ON.
5. Pop in a cassette. (Refer to page 20 for details.)
6. Set tape speed to SP or LP.
7. Press REC standby button.
8. Press FULL AUTO button.
9. Shoot (press recording start/stop button).
10. Stop recording (press recording start/stop button).
11. To end recording, press STOP button.
    - To play back the recorded tape, press REW button and then PLAY.

LCD INDICATIONS

ENGLISH

LCD Panel For Operation Of Recorder Section



1 Hi-Fi Audio level indicators

2 Tracking/Search mode indicator
When either tracking button is pressed, "TRACKING" appears and the digit shows from -15 to +15. See pages 32 and 33.
While the variable-speed search is in operation, "SEARCH" appears and the digital readout shows 1, 3, 5, and 7.

3 Counter memory indicator
Appears when the MEMORY button is pressed.

4 Tape counter
Shows tape time in minutes and seconds in the COUNTER mode, and remaining tape time in the T. REMAIN mode.

5 Condensation warning
Appears when excessive moisture condensation occurs inside the unit.

6 Battery warning
Flashes when the battery power becomes insufficient for normal operation.

7 Cassette warning mark
Blinks if no cassette is loaded, or if a cassette with its safety tab removed is loaded.

8 Recording speed indicator

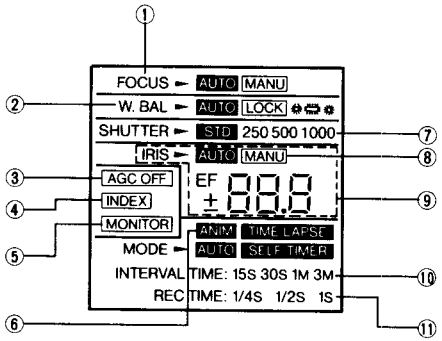
9 S-VHS mode indicator
Lights when the S-VHS recording mode select switch ⓬ is set to ON-AUTO and a cassette marked S-VHS-C is inserted for recording.

Symbolic operation mode indicator

RECORD	RECORD STANDBY	PLAY	PAUSE	SHUTTLE SEARCH		FAST FORWARD	REWIND
				FORWARD	REVERSE		
●	●II	▶	II	▶▶▶	▶◀◀	▶▶	◀◀
INSERT EDITING	AUDIO DUBBING	EDITING	STOP	FRAME ADVANCE	SLOW	RETAKE RWD	RETAKE FF
◔	⊖	▶ Blinking	■	II▶	II▶	▶◀◀ Blinking	▶▶ Blinking

ENGLISH

LCD Panel For Operation Of Camera Section



① **Focus mode indicator**
Shows the selected Auto Focus or Manual Focus mode.

② **White balance mode indicator**
AUTO, LOCK, or manual settings for tungsten and halogen light, fluorescent light, or daylight.

③ **AGC OFF indicator**
Appears when the AGC button is pressed to OFF. No indication appears in the AGC Auto mode.

④ **Index marking indicator**
Blinks when an index code is being recorded manually by pressing the VISS button.

⑤ **Rehearsal mode indicator**
Appears when the MONITOR button is pressed for rehearsing shots without recording on the tape.

⑥ **Camera mode indicator**
AUTO for normal continuous recording, ANIM for animation recording (engaged by pressing the REC TIME button), TIME LAPSE for time-lapse recording (engaged by pressing the REC TIME and INTERVAL buttons), SELF TIMER for self-timer recording (engaged by pressing the INTERVAL button).

⑦ **Shutter speed indicator**
STD for standard 1/50 sec., 250 for 1/250 sec., 500 for 1/500 sec., and 1000 for 1/1000 sec.

⑧ **Iris mode indicator**
Shows the selected Auto Iris (Aperture) or Manual Iris mode.

⑨ **Iris control indicator**
In the Auto Iris mode (engaged by pressing the IRIS -/+ buttons simultaneously), this shows iris compensation values from -14 to +14, such as "EF +2".
In the Iris Lock mode (engaged by pressing the AUTO/MANUAL button while in the Manual Iris mode), this shows an f-stop number corresponding to the current setting, such as F1.4. Available indications include F1.2, F1.4, F2, F2.8, F4, F5.6, F8, F11, and F16.

⑩ **Interval time indicator**
Shows a selected interval time for self-timer or time-lapse recording.

⑪ **Recording time indicator**
Shows a selected recording time for animation or time-lapse recording.

VIEWFINDER INDICATIONS

The viewfinder provides comprehensive indications that you need while shooting.

On-screen display

The viewfiner indications can also be displayed on the screen of a monitor connected to the GR-S707E.

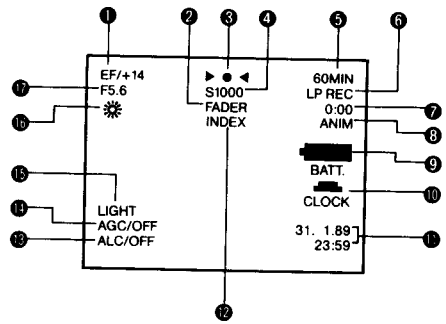
- Connect the VideoMovie to a video monitor. Press DISPLAY SELECT to display the On-screen Display mode. (Refer to "RECORDING THE DATE/TIME" on page 31.)
- The on-screen display on the connected monitor's screen is available only in Rehearsal mode.

❶ **Iris indication**
No indication: Manual Iris mode
In the Auto Iris mode (engaged by pressing the FULL AUTO button or AUTO/MANUAL button), the following indications are shown as the aperture compensation is manually applied by pressing either the APERTURE "-" or "+" button.

EF/+14
EF/+13
.
.
EF/+2
EF/+1
EF/0
EF/-1
EF/-2
.
.
EF/-13
EF/-14

The aperture will open up sequentially and the picture will become lighter.

The aperture will close down sequentially and the picture will become darker.



❷ **Fader indication**
FADER: Appears when the FADER button is pressed to "reserve" a fade-in or fade-out.

❸ **Focus indication**
In the Manual Focus mode, the following indication appears.
▶ : Focus behind subject. Turn the focus ring clockwise until ● appears.
● : Correct focus.
◀ : Focus in front of subject. Turn the focus ring counterclockwise until ● appears.
▶●◀: Low-contrast warning. Focus detection is not possible. Estimate the subject distance and set the focus ring referring to the distance scale on it.

❹ **Shutter speed indication**
No indication: Standard shutter speed (1/50 sec.)
S1000: 1/1000 sec.
S500: 1/500 sec.
S250: 1/250 sec.

❺ **Remaining tape time indication**
When a cassette is inserted, "—" blinks while the time is being detected.
Available indications are 60, 50, 40, 30, 20, 15, 10, 5, 4, 3, 2, 1, and 0 MIN, and as a tape-end warning, 2, 1 and 0 MIN will blink.

❻ **Recording status indicators**
— : Recording Standby mode in SP.
LP — : Recording Standby mode in LP.
REC : Recording is in progress in SP mode.
LP REC : Recording is in progress in LP mode.

❼ **One-shot time counter**
Shows the duration of one shot in minutes and seconds, if the ONE-SHOT TIME COUNTER switch is set to ON. Each time the trigger is pressed for the start of recording, the counter is reset to "0:00" and counts up in one-second steps until the trigger is pressed again for record pause.

❽ **Cassette warning and mode indicators**
CASSETTE : Blinks to warn that no cassette or a cassette without safety tab is inserted.
ANIM : Blinks while in the Animation mode.
T.LAPSE : Blinks while in the Time-Lapse mode.
SELF. T : Blinks while in the Self-Timer mode.

❾ **Battery warning**
Blinks when the battery power is insufficient for normal operation.

❿ **Lithium battery warning**
Blinks when the lithium battery is not in place or exhausted. In this condition, no date/time function is available.

⓫ **Date/time display**

⓬ **Index marking indicator**
Blinks while an index code is being recorded.

⓭ **ALC indication**
ALC/OFF : The ALC button is in the OFF position. The Hi-Fi audio recording level must be set manually.
No indication : The Hi-Fi audio recording level is automatically controlled.

⓮ **AGC indication**
AGC/OFF : The AGC button is in the OFF position.
No indication : The AGC is in operation for automatic compensation for insufficient illumination.

⓯ **Insufficient light warning**
"LIGHT" appears and blinks when illumination is insufficient for normal operation.

⓰ **White balance indication**
No indication : Auto White Balance mode
W.B. LOCK : Indicates that the automatically white balance setting adjusted is locked. The White Balance Lock mode is engaged by pressing the W.BALANCE LOCK button.
: Indicates that the preset white balance setting for daylight (5500 K) is selected by pressing the W. BALANCE button.
: Indicates that the preset setting for fluorescent light (4500 K) is selected.
: Indicates that the preset setting for halogen or tungsten light (3200 K) is selected.

⓱ **F-stop number indication**
No indication: Auto Iris mode.
When the AUTO/MANUAL button is pressed in the Auto Iris mode, the f-stop number corresponding to the current iris setting is displayed:
F1.2, F1.4, F2, F2.8, F4, F5.6, F8, F11, and F16

FOR A BETTER UNDERSTANDING OF S-VHS AND VHS

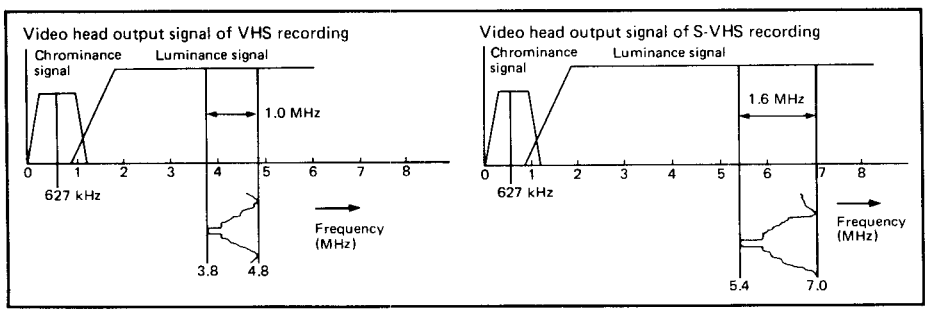
ENGLISH

S-VHS vs. VHS

- VHS is the world's most popular video format. If you already own a VCR, most likely it is a VHS machine.
- **S-VHS is a new video sub-format based on VHS. It offers superior picture quality with increased horizontal resolution by shifting the FM carrier frequency of the luminance signal from the conventional 3.8 – 4.8 MHz range to a higher one of 5.4 to 7 MHz.**

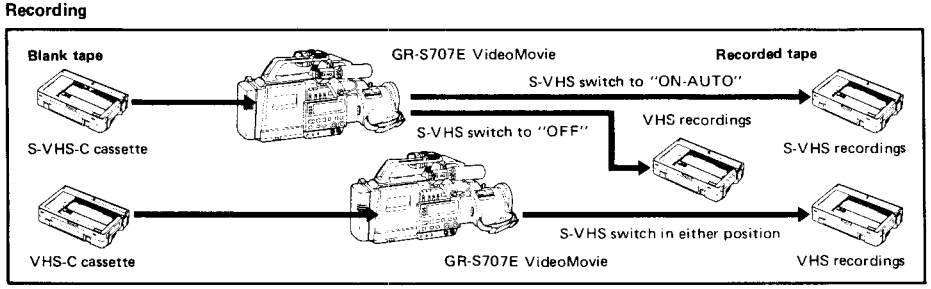
- The GR-S707E is equipped for recording and playback in both the S-VHS and VHS formats. Therefore, you can still play back your VHS software programs and previously recorded family recordings.
- You can switch to the world of S-VHS for your new recordings to enjoy breathtaking picture quality. Or to exchange recordings with someone whose VCR is not S-VHS, simply record in the VHS mode, whether with a regular VHS cassette or an S-VHS cassette.

Recording Signal Spectrum

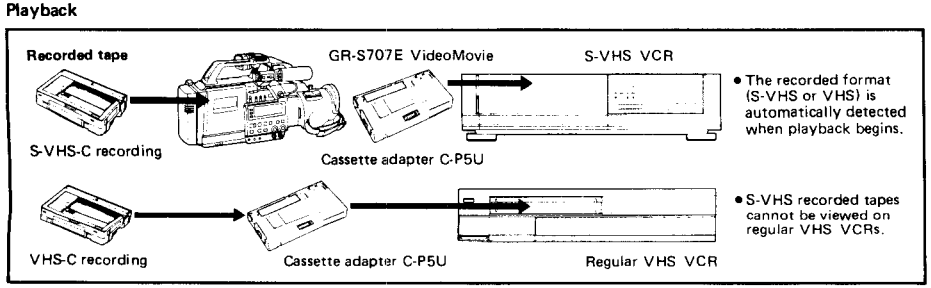


Compatibility between S-VHS and VHS

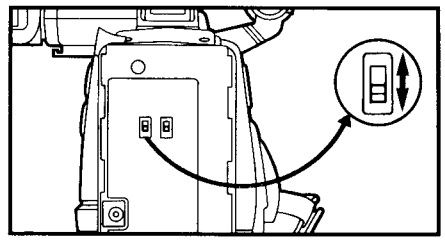
Recording



Playback


Recorded tape
GR-S707E VideoMovie
S-VHS VCR
S-VHS-C recording
Cassette adapter C-P5U
VHS-C recording
Cassette adapter C-P5U
Regular VHS VCR
• The recorded format (S-VHS or VHS) is automatically detected when playback begins.
• S-VHS recorded tapes cannot be viewed on regular VHS VCRs.

Selecting the S-VHS/VHS mode

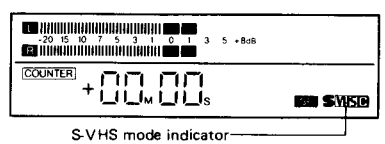


1 Set the mode select switch to "ON-AUTO". The GR-S707E automatically detects the type of cassette so that the appropriate mode is automatically selected.
With a cassette marked "S-VHS-C": S-VHS mode (The S-VHS mode indicator lights.)
With a cassette marked "VHS-C": VHS mode

2 Set this switch to "OFF". The VHS mode always remains in effect, regardless of the cassette used.

S-VHS mode indicator

The S-VHS mode indicator remains lit while the GR-S707E is in the S-VHS mode. (When the S-VHS mode select switch is set to "ON-AUTO" and an S-VHS-C cassette is inserted.) It also remains lit when playing back S-VHS-C programs recorded on an S-VHS cassette.



Note:
With the switch set to "ON-AUTO", in playback, if regular VHS signals are recorded on an S-VHS-C cassette, the GR-S707E switches to the VHS mode automatically. At the same time, the S-VHS mode indicator goes off.

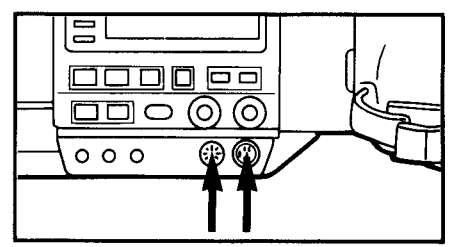
How to take best advantage of S-VHS pictures

For flexibility, the GR-S707E has an 8-pin terminal, and an S-VIDEO terminal.
The S-VHS signal is separated into Y and C (luminance and chrominance) signals, while the regular video signal is a composite video signal in which the luminance and chrominance signal are mixed.
The 4-pin [S] OUT terminal ㉙ is exclusively for the separated Y/C signals.
The 8-pin terminal is an AV OUT terminal which delivers either the seperated Y/C signal or the composite video signal depending on the setting of VIDEO OUT switch ㉚.

Using a television with S-VIDEO input

If your television is equipped with an S-VIDEO input (separated Y/C signals) terminal, this is an ideal way to enjoy the best possible S-VHS picture, because no interference occurs between the luminance and chrominance signals.
Connect the S-OUT terminal of the GR-S707E to the S-VIDEO IN terminal of your television. To view video cassettes with this setup, set the TV to the AV mode. (It is not necessary to set the TV to channel 36.)

S-OUT connector



When using the S-OUT connector, use the AV OUT connector in combination with it. Y/C separated video signals are delivered from the S-OUT terminal and accompanied audio signals from the AV OUT connector. For detailed connection, see page 34.

ENGLISH

INFORMATION ON THE GR-S707E'S AUDIO SYSTEM

ENGLISH

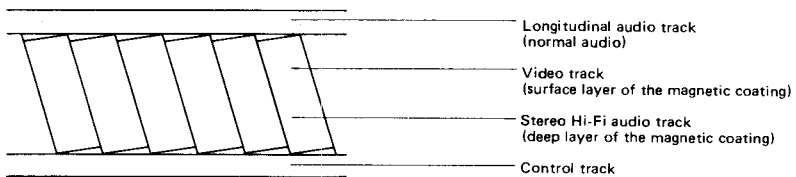
Hi-Fi and normal audio

To provide true Hi-Fi audio accompaniment to Super VHS entertainment, the GR-S707E employs a unique audio recording system. Hi-fi audio signals (2-channel) are recorded deep into the tape's magnetic coating, and the video signal is recorded on top of the audio signals in a shallower layer. At the same time, another audio head records normal audio signals (monaural) onto the usual longitudinal audio track. Since this longitudinal audio track is exactly the same as on non-Hi-Fi VHS tapes, audio signals recorded on tapes with the GR-S707E can be played back on other VHS machines, and vice versa.

CAUTION:

- The Hi-Fi soundtrack recorded with the GR-S707E cannot be reproduced with video equipment other than Hi-Fi VHS.
- Tapes recorded with a conventional stereo video recorder produce monaural sound when played back with the GR-S707E.

Tape pattern recorded with GR-S707E



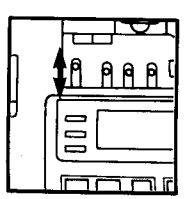
Hi-fi audio recording and reproduction are available only from the Hi-Fi audio track while the longitudinal audio track provides normal audio.

The Hi-Fi and normal soundtracks are recorded simultaneously.

The audio recording options are as follows:

Mike	Lontigudinal audio track	Hi-Fi audio track	
		L	R
Provided mike	L + R	L	R
Mono mike connected to "STEREO" connector	MONO/L	MONO/L	No audio
Mono mike connected to "MONO" connector	MONO/R	MONO/R	MONO/R
Stereo mike connected to "STEREO" connector	L + R	L	R

When monitoring audio during playback



Set the AUDIO OUT mode select switch according to the audio track you wish to listen to. (Also effective when monitoring with the provided stereo earphones connected to PHONES jack.)

NORM: To listen to the sound recorded on the longitudinal (normal) audio track.

MIX : To listen to the sound recorded on both Hi-Fi and longitudinal audio tracks. (mixed audio).

Hi-Fi : To listen to the sound recorded on the Hi-Fi audio track.

- When playing back a tape containing the same soundtrack on both hi-fi and normal audio tracks, a slight time lag is sensed between the two sound tracks, probably with some distortion, in the MIX position. Therefore, in such a case, use the NORM or Hi-Fi position.

Hi-Fi Recording Level Control

ENGLISH

The GR-S707E features the Hi-Fi VHS system for quality audio recording. The recording level is automatically adjusted in the ALC (Automatic Level Control) mode ❼. When you desire to adjust the level manually, proceed as follows.

1 Set the ALC switch ❼ to OFF. "ALC/OFF" appears on the viewfinder screen.

2 Turn the Hi-Fi REC LEVEL control knob ⓫ to adjust to your preferred level while referring to the Hi-Fi audio level indicators.

- To obtain an optimum setting for the recording level, adjust the control knob until the black square peak indicators, which appear when the loudest signal is being received, are aligned with "0" on the LCD's printed scale.
- If the recording level is too high, excessive noise will result; if too low, distortion will result.
- Be sure to set the ALC switch back to AUTO for automatic ALC adjustment.
- Ordinarily set the control knob to its centre position.

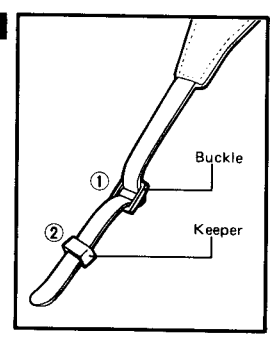
3 Turn the Hi-Fi REC LEVEL BALANCE control knob ⓬ to adjust the balance between the L and R channels to your preference for recording. Refer to the Hi-Fi audio level indicators while adjusting.

- Ordinarily set the control knob to its centre position.

BASIC PREPARATIONS

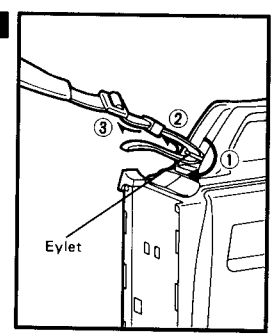
Attaching the shoulder strap

1



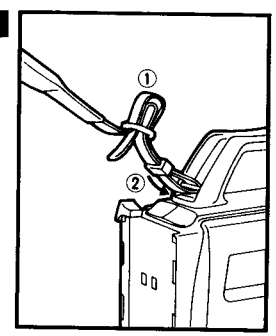
Slide the strap buckle and strap keeper off the end of the strap. Replace them on the strap: the buckle first ①, then the keeper ②.

2



Loop the end of the strap over the top of the eyelet ①, then, folding it back, thread the end of the strap first through the keeper ②, then the buckle ③. Making sure that the strap is not twisted, repeat the above procedures to attach the other end of the strap to the other eyelet.

3

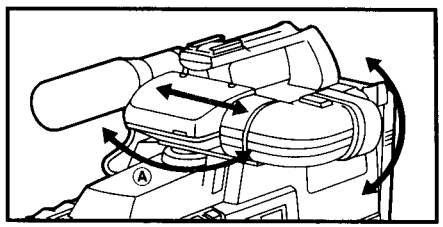


Adjust the shouler strap to the desired length ①, then slide both keepers up snug against the eyelets to prevent the strap from slipping ②.

ENGLISH

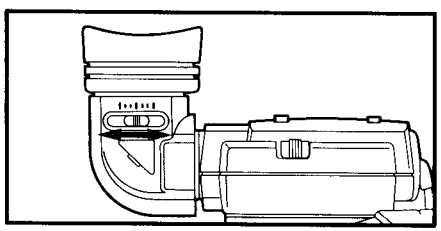
Adjusting the Viewfinder

Positioning the viewfinder



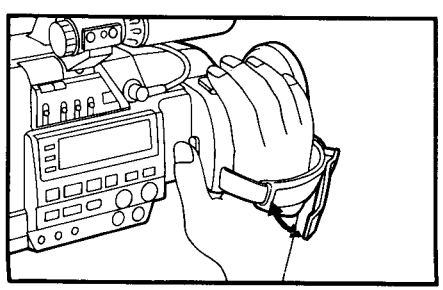
The viewfinder can be positioned for best viewability. It can be slid left and right, rotated 90° and tilted 180°. The horizontal, outer-most position allows left-eye monitoring. When storing or carrying the camera, rotate and keep the viewfinder at position Ⓐ.

Diopter adjustment



The viewfinder lens can be adjusted to suit the operator's eyesight by moving the dioptric adjustment control located underneath the eye cup.

Adjusting the grip strap

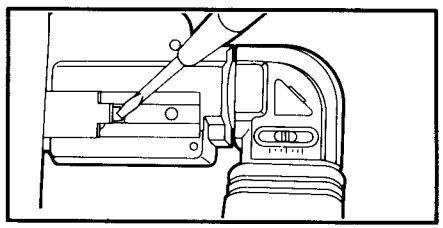


① Separate the Velcro strip to expand the loop.
② Pass your right hand through the loop and grasp the lens grip. Adjust the length of the strap to suit your hand size and refasten the Velcro strip.

Removing and Mounting the Viewfinder

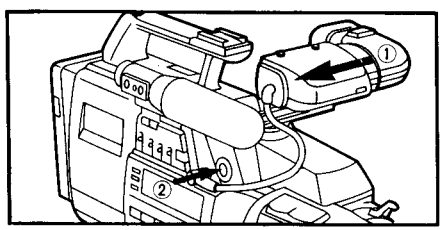
Switch off power before removing or mounting viewfinder.

Removing the viewfinder



Slide the viewfinder holder out until it is engaged by the latch on the mounting shoe. Push the catch on the viewfinder holder with a small pointed object (like a ballpoint pen) and pull out the viewfinder.

Mounting the viewfinder



① Slide the viewfinder holder into the mounting shoe, until it moves past the latch.
② Connect the viewfinder cable to the viewfinder cable connector.

POWER SUPPLY SYSTEM

ENGLISH

The convenient 3-way power supply system gives you a choice of the most appropriate power supply unit, depending on the application.

CAUTION
- No function is available without power supply.
- Do not use any power supply other than specified.
- Never attempt to use these power supply units with any equipment other than the VideoMovie.

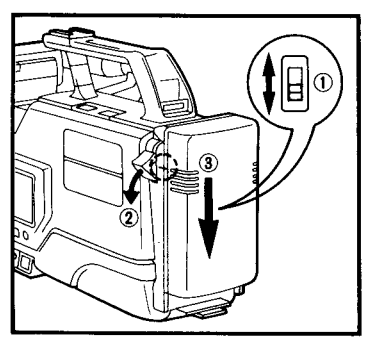
Where AC power is not available

Use the battery packs:
- BN-V66RU (High-capacity)
- BN-V77RU (Super-high-capacity)

Note:
The battery pack has been kept in the uncharged state for shipment. Therefore, before use, be sure to charge it. See page 40.

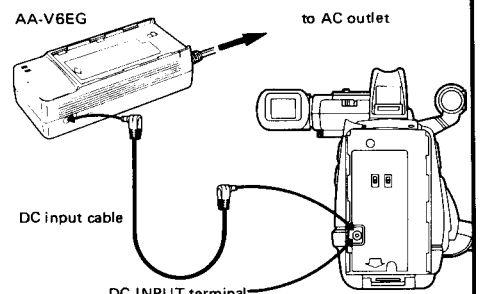
Attaching the Battery Pack
① Set the S-VHS switch. (See page 15.)
② Pull down the battery pack release lever.
③ Align the battery pack over the outline in the battery pack mount, and slide the battery pack in the direction of the arrow until the lever moves up to lock the battery securely in place.

To remove the battery pack, pull down the battery pack release lever and slide out the battery.



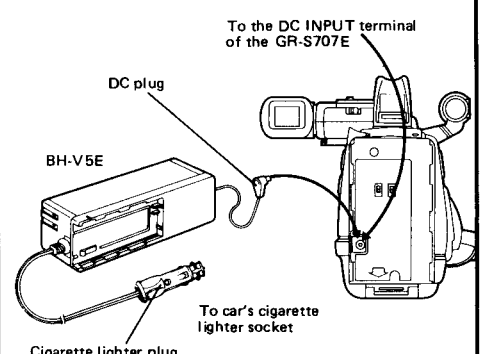
With AC power

Use the provided AA-V6EG AC power adapter/battery charger.



In a car

Use the optional BH-V5E car battery charger.
- Leave the car's engine idling when using the car battery. (For use with 12 V negative-grounded cars only.)

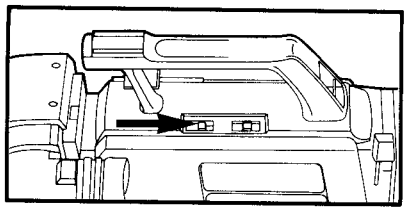


LOADING AND UNLOADING A VIDEO CASSETTE

ENGLISH

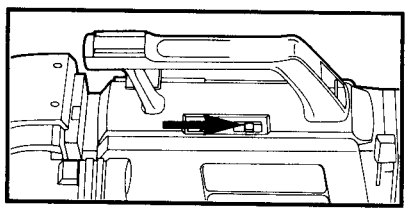
LOADING

1



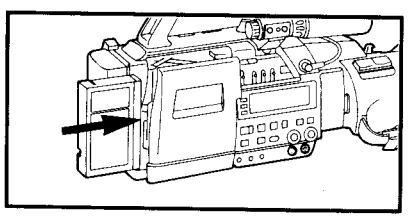
Slide the POWER switch to turn power on.

2



Open the cassette holder by sliding the EJECT switch.

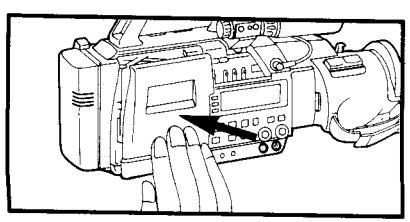
3



Insert the cassette with its printed arrow facing outward and pointing forward.

Ensure that tape is not slack inside the cassette, then load the cassette correctly. See page 5.

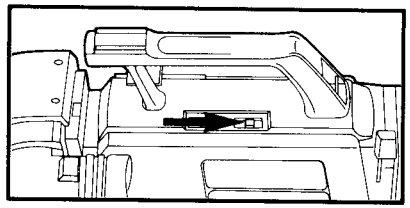
4



Close the cassette holder by pushing its centre area.

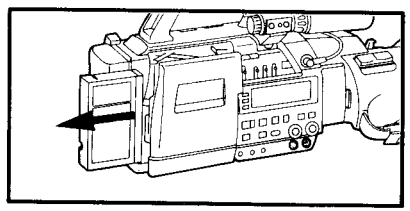
UNLOADING

1



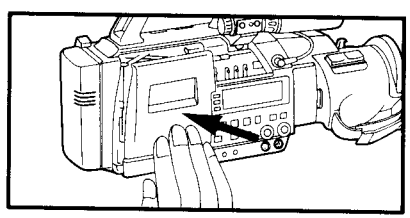
Make sure the unit is in the Stop mode. Slide the EJECT switch. The cassette holder will open.

2



Remove the cassette.

3



Close the cassette holder by pushing its centre area.

- When not in use, switch off power.

Note:

- Do not repeat loading and unloading of the cassette without running the tape, as this will slacken the tape, causing tape damage.

FULL-AUTO RECORDING OPERATION

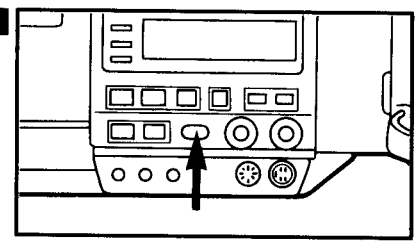
1

- Slide the POWER switch to turn the power on.
- Set the S-VHS mode select switch to "ON-AUTO" (for automatic detection of S-VHS or VHS tape, see page 15) or to "OFF" (for VHS recording, regardless of type of tape used).
- Set the SP/LP recording mode select switch as required.
- Set the ALC switch to AUTO.
- If you prefer to monitor the audio during recording, connect the provided stereo earphones.
- Insert a video cassette correctly (with its safety tab in place).

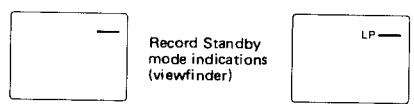
Note:

Only S-VHS tapes can be used to make S-VHS recordings.

2

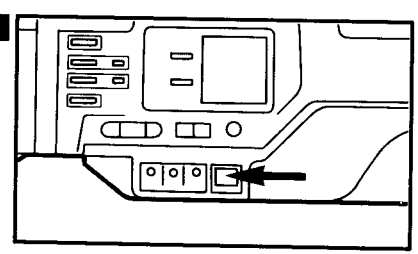


Press the REC button. The unit enters the Record Standby mode. (The aimed-at scene will appear on the viewfinder screen.)



Check the viewfinder and LCD indications. See pages 11 through 13.

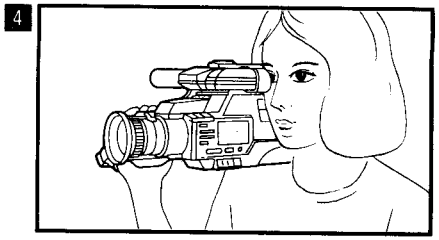
3



Press the FULL AUTO button.

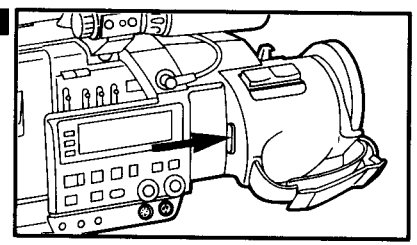
- In the FULL AUTO mode, W.BALANCE, SHUTTER, Iris and/or AGC indications do not appear on the viewfinder screen.

4



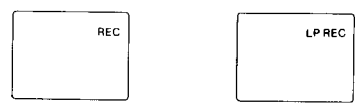
Determine the composition by referring to the viewfinder image. For zooming, see page 27.

5



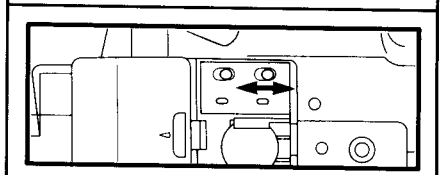
Press the recording start/stop button.

- This causes REC or LP REC to appear, showing on the viewfinder screen that recording is actually taking place.



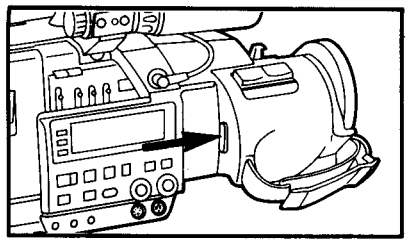
- During recording, the tally lamp lights continuously unless it is turned off.

Trigger alarm system



When the ALARM switch is set to ON, an electronic alarm beeps when the Recording start/stop button is pressed to begin recording.
The electronic alarm beeps twice when the Recording start/stop button is pressed for record pause. This alarm helps prevent recording errors.

6

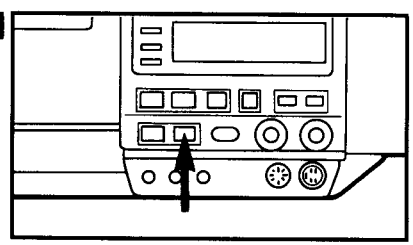


To stop recording temporarily, press the recording start/stop button once again.

7 To restart recording, press the recording start/stop button.

- For a longer pause, slide the POWER switch to OFF to save power.
- If the Recording Standby mode continues for longer than about 5 minutes, the unit switches itself off automatically. To restart recording, turn the power on and press the recording start/stop button. This makes clean assembled recordings possible even after a long pause.

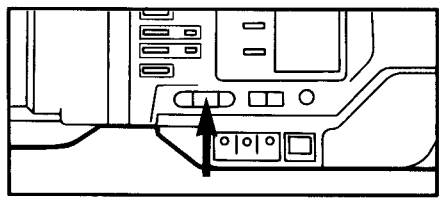
8



To end recording, press the STOP button.

- After making sure that the tape has stopped, slide the POWER switch to OFF.

Quick Review function



- If you want to review the end of the last recorded segment for confirmation, press the QUICK REVIEW button from the Record Standby mode; the tape will be rewound for about 2 seconds of program time and played back automatically for this section, after which it will stop in the Recording Standby mode in readiness for the next shot.

Note:

- Distortion might occur when playback starts. This is normal.

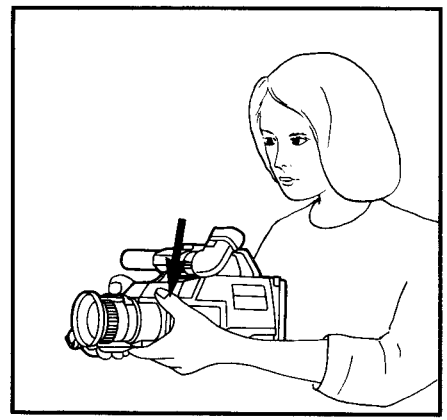
Assemble recording

- Repeating steps 6 and 7 produces assemble recordings. In playback, the picture may be slightly distorted at the point between separate takes. This is not due to any defect of the unit.
- If recording is restarted from the Stop mode, a few frames of the previously recorded picture is replaced with a new recording. To avoid this, follow the techniques described in "Assemble Recording Technique" on page 24.

Record Standby mode save function

This function is another useful convenience for further saving battery power when intervals between shots are rather long. While in Record Standby mode, slide the POWER switch to OFF, then after composing the shot, slide only the POWER switch to ON again and the Record or Recording Standby mode is restored automatically.

Second recording start/stop button (SUB TRIGGER) – for low-angle shots



When you shoot scenes from a low angle, use the second recording start/stop button for better viewability and securer positioning of the camera.

Rehearsal

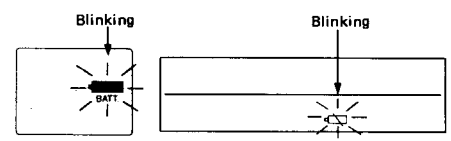
If you wish to rehearse shooting angles, compose scenes, etc., without actually recording on the tape, you can perform rehearsal by simply pressing the MONITOR button. The scene will appear on the viewfinder screen.

- To disengage the Rehearsal mode, press the STOP button again.
- The power save circuit does not function during rehearsal. (For power save function, see page 24.)

Warnings

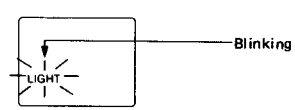
Mode/Status	Viewfinder	LCD
Battery warning	BATT. Blinking	Blinking
Lithium clock battery warning	CLOCK Blinking	
Condensation warning		Blinking
Low-light warning	LIGHT Blinking	
Low-Contrast warning (AUTO/MANUAL)	Blinking	
Tape-end warning	2 MIN Blinking (2, 1, 0 MIN)	

Battery warning



- When the battery's power is coming to an end, a battery warning indication appears both in the viewfinder and the Recorder section LCD. Replace the battery pack with a fully charged one.
- After these indications appear, the power turns off automatically. In this state, however, sliding the POWER switch to ON while holding the EJECT switch slid back, turns the power on and ejects the cassette.

Low-light warning



- If the blinking "LIGHT" indicator appears on the viewfinder screen, the amount of light is insufficient. Increase the lighting.

POWER SAVE AND TAPE PROTECTION CIRCUIT

ENGLISH

- To save power, the GR-S707E switches itself off automatically in the following situations:
  (1) When left for longer than 5 minutes in the Stop mode.
  (2) When left for longer than 5 minutes in the Recording Standby (Record-Pause) mode.
- To protect the tape, the GR-S707E releases tape tension slightly and switches itself off automatically if left for longer than 5 minutes in the Recording Standby (Record-Pause) mode.
- For the same reason, the GR-S707E enters the Stop mode if left for longer than 5 minutes in the Still (Play-Pause) mode.

Battery operation

STOP → POWER OFF
5 minutes

Battery/AC operation

RECORD PAUSE → POWER OFF
5 minutes

PLAY PAUSE (STILL) → STOP
5 minutes

ASSEMBLE RECORDING TECHNIQUE — 1 (To replace the battery pack during recording)

1 If the battery warning appears in the viewfinder or the Recorder section LCD while recording, stop recording by sliding the POWER switch to OFF. Do not use the STOP button.

2 Replace the battery pack with a charged one.

3 Slide the POWER switch to ON.
- The unit will be in the Recording Standby mode.

4 Press the recording start/stop button to start recording.

ASSEMBLE RECORDING TECHNIQUE — 2 (To search for the assemble point with the "Retake" function)

After reviewing a recorded segment, you may decide to re-record it immediately. The Retake function is convenient for this.

1 Make sure the VideoMovie is in the Recording Stand-by mode. (If not, engage the mode.)

2 Press either RETAKE R or F button to reach the point where you wish a new recording to start. When the RETAKE button is released, the VideoMovie will enter the Recording Standby mode again.

3 Press the recording start/stop button to start re-recording.

ASSEMBLE RECORDING TECHNIQUE — 3 (To record onto a partically recorded tape)

1 Play back the tape to a point where you wish a new recording to start.
- Use the SHUTTLE SEARCH button for faster location.

2 Press the PAUSE/STILL button at the located point.
- The unit will enter the Still mode.

3 Press the REC and PAUSE/STILL buttons.
- The unit will enter the Recording Standby mode.

4 Press the recording start/stop button to start recording.

ADVANCED VIDEOGRAPHY TECHNIQUES

WHITE BALANCE ADJUSTMENT

The GR-S707E's Automatic Colour Tracking system senses the colour temperature of the ambient lighting for automatic white balance adjustment.
However, precise colour temperature adjustment is not possible under the following conditions.
- The light falling on the object being shot and the light around the camera are of different colour temperatures.
- Either the object or the camera is in an area covered by a shadow.

In these cases use the GR-S707E's built-in filters for white balance adjustment.
- Press the W. BALANCE button until the required symbol appears on the viewfinder screen.
  : Under light of halogen or tungsten lamp.
  : Under light of fluorescent lamp.
  : Under sunlight (natural light).
- To switch to the automatic adjustment, press the W. BALANCE button until the indication disappears, or press the FULL AUTO button.

White balance lock

1. Attach the lens cap (white balance cap) to the lens hood. When adjusting indoors, aim the VideoMovie at a light source. When outdoors, aim it at the subject.
2. Press the W.BALANCE LOCK button to lock the current white balance value.
   W.B LOCK appears on the viewfinder screen.
3. To cancel the white balance lock mode, press W.BALANCE LOCK again to release.

Notes:
- Even when the W.BALANCE LOCK button is pressed, the "W.B LOCK" indication continues to blink if the lighting condition is beyond the VideoMovie's adjustable colour temperature range. At this time:
  - The white balance is adjusted to the nearest possible colour temperature so that shooting is possible.
  - With a subject under dim lighting, apply more light.
  - For more precise white balance adjustment, use appropriate colour filters.
- Locked white balance adjustment is kept in memory about 30 minutes.
- If you shoot more than 30 minutes after adjusting white balance, or if lighting conditions change, perform white balance adjustment again.

AGC

ENGLISH

The GR-S707E incorporates an AGC (Automatic Gain Control) circuit that electronically activates increased sensitivity in low-light situations.
- The AGC is set to AUTO in the FULL AUTO mode. (No indication on the viewfinder screen.)
- When you do not need the AGC, press the AGC button. The "AGC OFF" will appear on the viewfinder screen.

When you wish to capture the natural change in normal outdoor lighting, switch off the AGC, even when shooting under low illumination, otherwise naturalness will not be maintained.

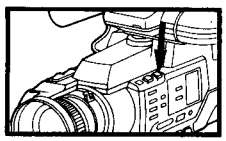
IRIS CONTROL

Iris is automatically adjusted in the FULL AUTO mode. However, you can adjust it manually from its current setting.
(1) Press either APERTURE button ("+" or "–") ⓫. The iris indication appears on the viewfinder screen and LCD for camera operation.
(2) Select the required iris level.
APERTURE "+" button: Each time it is pressed, the aparture opens one step, up to +14 steps.
APERTURE "–" button: Each time it is pressed, the aperture closes one step, up to -14 steps.
- The viewfinder indication and camera section LCD show the selected setting, indicating only the over- or underexposure status.
- When you simply wish to compensate for strong backlightning, see the "Backlight Compensation" section below.
- To restore the standard "0" iris setting, press the APERTURE "+" and "–" buttons simultaneously.

Iris Lock

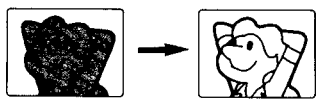
An Iris Lock function has been provided to maintain a constant iris setting for a longer period of time and from location to location.
Press the AUTO/MANUAL button ⓬ while in the Auto Iris mode to retain the current iris setting.
- The current iris setting will appear in the viewfinder and on the camera section LCD from among the following indications — F1.2, F1.4, F2, F2.8, F4, F5.6, F8, F11, and F16.
- While in this mode the Iris can be adjusted manually to any of the above f-stop settings by pressing the MANU IRIS -/+ buttons.
- To cancel the Manual Iris mode, press the AUTO/MANUAL button again.

BACKLIGHT COMPENSATION



●Press the BLC button. While it is being pressed, the iris is 1 – 2 f-stops wider than that adjusted automatically.

When excessive lighting is located in back of the subject, correct exposure may not be obtainable. To compensate for this, simply press BLC.

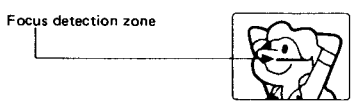


Without BLC　　With BLC

FOCUSING

Auto focusing

The GR-S707E incorporates an auto-focus mechanism which enables automatic focusing onto most subjects.



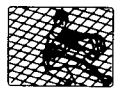
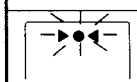
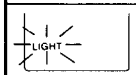
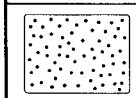
●A narrow area in the center and extending horizontally for about 1/2 the width of the screen is used to detect focus. (No actual indication provided on the screen.)

Simply press the FULL AUTO button. ㉚

CAUTION

- ●Do not touch the focus ring while the autofocus mechanism is in operation.
- ●Except while actually shooting, keep the lens capped. Whenever light enters the lens, the auto-focus mechanism functions and consumes power.
- ●Do not attempt to use auto-focus when a telecon-version or wide-angle conversion lens is attached. This could lead to damaging the auto-focus mechanism. Engage the manual focus mode with add-on lenses.

Correct focus may not be obtained in the following situations. In such cases manual focusing should be performed to obtain proper focus.

	Two subjects at different distances overlap in the same scene.
	Horizontal lines only.
	If focus-aid indication is difficult because of low contrast, these focus-aid indicators appear simultaneously and blink.
	Low illumination where the under-exposure indicator appears on the Viewfinder screen.
	Minute patterns or identical patterns that are regularly repeated.

Manual focusing

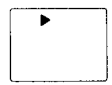
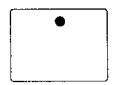
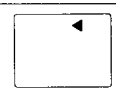
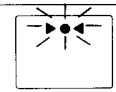
When you select the Manual Focus mode, proceed as follows.

1. Press the FOCUS button ㉚ to release the Auto Focus mode.
   The focus aid indication(s) appears on the viewfinder screen.
2. Zoom in on a subject by pressing the "T" button ㉘ of the power zoom buttons.
3. Turn the focus ring ㉗ to focus onto the subject. Refer to the focus aid indication chart on the right.
4. Determine the composition by pressing the "W" button ㉘.

- ●To release the Manual Focus mode (to engage the Auto Focus mode), press the FOCUS button or FULL AUTO button.
- ●When you use the Manual Focus mode, be sure to focus the lens in the maximum telephoto position. If you focus in on a certain subject in the wide-angle position, sharply-focused images cannot be obtained when zoomed up because the depth of field is reduced at longer focal lengths.

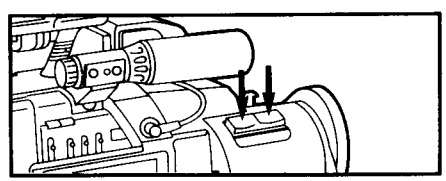
FOCUS INDICATORS

The focus indicators on the viewfinder screen function in the Manual Focus mode.

Condition	Indication	Corrective operation
Focus point behind the subject		Turn the focus ring clockwise until the center square lights.
Correct focus		Keep the focus ring in the same position.
Focus point in front of the subject		Turn the focus ring counterclockwise until the center square lights.
Indication not possible because of low contrast		Estimate the subject distance and set the focus ring referring to the distance scale on it.

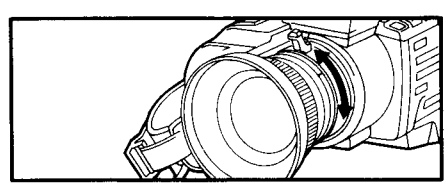
ZOOMING

When the focal length of the lens is varied by turning the zoom ring, the image appears to come nearer to or retreat from the viewer.



Power zooming

Press "T" for zooming in and "W" for zooming out. Two zooming speeds are available. For slow-speed zooming, press lightly. For regular-speed zooming, press firmly.

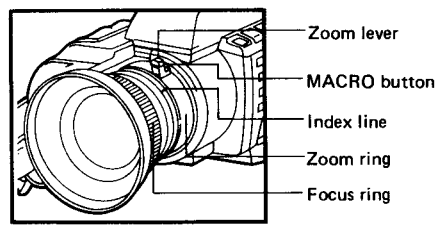


Manual zooming

Rotate the zoom lever downwards for zooming in and upwards for zooming out.

MACRO SHOTS

Normally, focusing is possible only for subjects that are more than 1.2 m away from the camera. By setting the lens to the Macro mode, it is possible to manually focus in on any subject located inside that limit, right up to the front of the lens. The MACRO and Zoom ranges combined give continuous shooting ability from close-up to infinity.



● First engage the manual focus mode.

Engage MACRO

1. While pressing in the macro button, turn the zoom ring in the direction of the arrow until the number "9" on the zoom ring passes the index line.

Focus

2. Focus by turning the zoom ring slowly.

- ●Use the zoom ring to focus in the MACRO range.
- ●Turning the zoom ring will slightly alter the angle of view of the lens.
- ●The zoom and auto-focus machanisms do not function during macro shooting.

Release MACRO

3. To release the Macro mode, turn the zoom ring in the direction of the arrow until the number "9" passes the index line.

Note:
It is advisable to increase illumination when shooting in macro for best results.

ENGLISH

FADE-IN/FADE-OUT

The GR-S707E is equipped with an automatic fade mechanism for allowing smooth fade-in and fade-out with a black-coloured blank screen. Audio also fades in sync with video. (The audio source connected to the AUDIO IN terminal cannot be faded in or out.)

Automatic fade-in

1 Determine the composition in the Record Stand-by mode and press the FADER button to reserve the Fade-in mode.

2 Press the recording start/stop button. The screen will quickly become black and recording begins. When the recording start/stop button is released, fade-in will start. It will be completed in about 5 seconds. If the recording start/stop button is not released when pressed, the black picture will remain on the screen and be recorded.

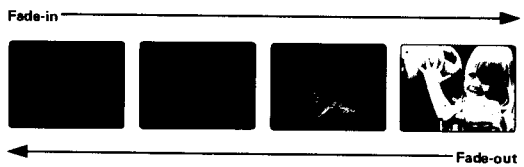
Automatic fade-out

1 Start shooting as usual.

2 Press the FADER button to reserve the fade-out mode.

3 Press the recording start/stop button. Fade-out will start and be completed in about 5 seconds. When completed, Record Standby mode is entered. If the recording start/stop button is not released when pressed, the final black picture remains on the screen and continues to be recorded, until the button is released.

FADER is display in the viewfinder when fading is reserved, and continues to be displayed until fading in or out is complated.



INDEX CODE MARKING

The VHS Index Search System (VISS) gives you automatic access to any point you select on a recording. Only the marking aspect of the Index Search System is included in this unit. It allows index codes to be placed on recorded tape for convenient dubbing or editing on VCRs with an Index Search function.

- Press the VISS button once to put an index code onto the tape. The INDEX mode indication blinks in the viewfinder during the marking process.

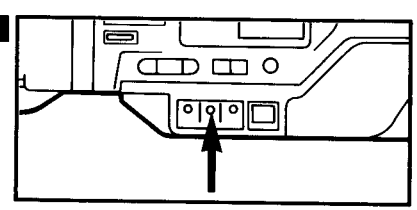
Notes:

- When the "INDEX" indication appears in the viewfinder, no VideoMovie functions can be executed.
- If the VISS button has been pressed in the Record Pause mode, an index code is put at the point where the recording start/stop button is pressed.

MULTIPLE-SPEED ELECTRONIC SHUTTER

The GR-S707E is equipped with a selectable high-speed shutter that allows better recording of quick movements for sharp, clear stills or slow-motion playback. Select it when taping fast-action shots that you will want to play back later in still or slow-motion mode.

1



Press the SHUTTER button to switch to the desired electronic shutter speed. This can be done while recording or in any other mode. It continues at the selected speed until switched to another speed.

2 Select the shutter speed among 1/1000, 1/500, 1/250 and Standard (1/50) second by pressing the SHUTTER button. Each time it is pressed, the shutter speed changes in the following order:

1/1000 → 1/500 → 1/250 → (Standard)

3 When finished recording the fast-action scene, switch back to the standard shutter speed by pressing the SHUTTER button until STD appears on the LCD.

- When selected, the High-Speed Shutter mode is indicated on the viewfinder screen and LCD.
- The Standard Shutter mode is indicated by "STD" on the LCD.

Notes:

- The High-Speed Shutter mode requires slightly more subject illumination than the Standard Shutter mode. Therefore, the low-light warning may blink in the viewfinder. If so, switch to the Standard Shutter mode.
- Picture colour may be adversely affected in the high speed shutter mode when the subject is lit by alternating discharge-type light sources such as fluorescent or mercury-vapor lights.
- When playing back a section recorded in the High-speed Shutter mode, movement of subjects in the picture may not be smooth. This is not due to any defect of the unit.
- Pressing the FULL AUTO button also restores the shutter speed to the standard level.

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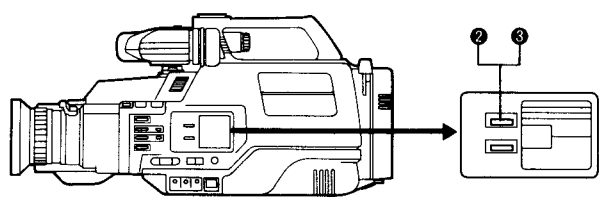
SPECIAL RECORDING FUNCTIONS

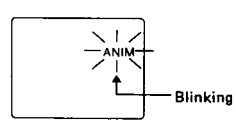
Note:
When performing animation or time-lapse shooting, set the recording mode switch to "SP". Recordings mode in the LP mode can result in noisy pictures.

Animation Shooting

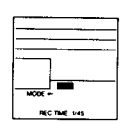
Animation produces the illusion of movement in otherwise stationary scenes or objects. This technique is accomplished by shooting a series of slightly different pictures of the same scene or slightly different poses of the same object for a brief period of time.



❶ Put the VideoMovie in the Record-Pause mode.
❷ Press the REC TIME button.
- The following information will appear in the camera section LCD with an initial setting for 1/4S to show the camera is set to record for about 1/4 second.



Viewfinder



Camera section LCD

❸ Press the REC TIME button again to select the desired recording time. The following sequence of time settings is displayed with each press of the button: 1/4S, 1/2S, 1S and continuous mode.
❹ Press the Recording Start/stop button after focusing the camera on the subject.
- Recording stops automatically in the Record-Pause mode after the selected period of time.

❺ Repeat Step 4 for the required number of pictures.
❻ Play back the recorded series to check if results were satisfactory.

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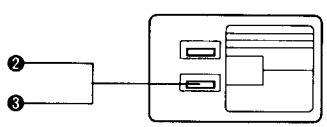
Notes:

- Keep the camera steady in one position when filming the series of shots for best results. Mounting the camera on a tripod is recommended.
- Release the Animation mode by pressing the REC TIME button till the "ANIM" indicator in the LCD and viewfinder disappears, or press the STOP button.
- Set the ALC switch to OFF, then adjust the Hi-Fi REC LEVEL control knob to "0". Add sound later by using the Audio Dubbing function.
- The Animation mode can only be engaged from the Record-Pause mode.
- Before recording in the Animation mode at the very beginning of a tape, set the VideoMovie to the Record mode for about 5 seconds, so that the tape runs smoothly. Using the Fade-in function at this point is a good way to begin an animated program.

Self-Timer Shooting

The Self-Timer function allows you to set the amount of time delay before recording starts after the Recording Start/Stop button has been pressed. If the VideoMovie has been secured, the operator can enter the picture before actual recording begins.

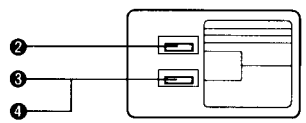
❶ Set the VideoMovie to the Record-Pause mode.
❷ Press the INTERVAL button ⑬.
- The following information will appear in the camera section LCD with an initial setting for 15S to show the camera is set for a 15-second delay before recording begins.



❸ Select the desired interval time by pressing INTERVAL repeatedly. The following sequence of time settings is displayed with each press of the button: 15S, 30S, 1M, 3M and normal mode.
❹ Press the Recording Start/stop button. When the selected time has elapsed, recording begins automatically.
- When performing Self-Timer shooting, if the TALLY switch is set to ON, the tally lamp will start blinking approximately 10 seconds before the actual recording begins. Then when recording starts, the lamp lights normally to indicate recording is in progress.

Time-Lapse Shooting

The Time-Lapse function allows automatic sequential on/off recording at preset time spans. With the camera continuously focused on a specific scene or object, the resulting recording will show subtle changes (such as shifts in cloud formations, plant growth etc.) over an extended period of time.



❶ Set the VideoMovie to the Record-Pause mode.
❷ Press the REC TIME button.
- The following information will appear in the camera section LCD with an initial setting for 1/4S to show the camera is set to record for 1/4 second.
- Select the desired recording time by pressing REC TIME repeatedly. The following sequence of time settings is displayed with each press of the button: 1/4S, 1/2S, 1S and continuous mode.

❸ Press the INTERVAL button.
- The following information will appear in the camera section LCD with an initial setting for 15 seconds.

❹ Select the desired interval time by pressing INTERVAL repeatedly. The following sequence of time settings is displayed with each press of the button: 15S, 30S, 1M, 3M and Animation mode.
❺ Press the Recording Start/Stop button to start the Time-Lapse Recording. The selected recording time and interval time will alternate automatically.
- To release the Time-Lapse mode, press either the STOP button, or the REC TIME and INTERVAL buttons the number of times necessary to release their respective mode, or press the Recording Start/Stop button during the Interval Time.

Notes:

- The Time-Lapse mode will enter the STOP mode automatically after the recording sequence is performed about 500 times.
- Set the ONE-SHOT TIME COUNTER switch to OFF when using special recording functions.
- The tally lamp functions in the same way as in Self-Timer shooting.

RECORDING THE DATE/TIME

Warning on lithium battery.
- **Dispose of used battery promptly.**
- **Keep away from children.**
- **Do not disassemble and do not dispose of in fire.**

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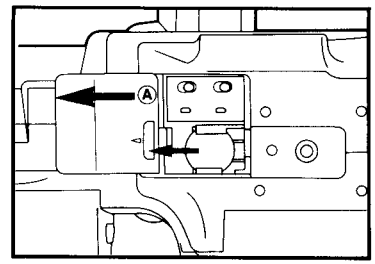
Battery insertion

This battery powers the date/time function.
1. Slide the cover off the clock battery compartment on the bottom of the VideoMovie by lightly pushing forward on the section labelled Ⓐ in the diagram.
2. Insert the provided lithium battery **with the plus (+) side up.**
3. Slide the cover back onto the unit until it clicks in place.

Note:
- Switch off the unit's power before inserting the battery.



Note:

Switch off the unit's power before removing old battery.
Replace battery with Panasonic (Matsushita type) CR 2025 only. Use of another battery may present risk of fire and explosion.

Battery replacement

The battery lasts for about one year. When the lithium battery warning (CLOCK) appears in the viewfinder, this battery needs to be replaced. Obtain a new CR 2025 lithium battery and follow the following procedure.
1. Remove the battery by pushing it in the direction of the arrow.
2. Insert the new CR 2025 **with the plus (+) side up.**
3. Slide the cover back until it clicks.

Date/time setting

Before adjusting the date and time for the first time or after replacing the battery, 1.1.89 appears in the viewfinder, indicating the clock needs to be set.

① Switch the unit's power on, 1.1.89 0:00 will appear in the viewfinder. Press MONITOR button to enter rehearsal mode.
② Press the DATE/TIME SELECT button – the day blinks.
③ Press the DATE/TIME SET button to choose the correct day.
④ Press the DATE/TIME SELECT button to select the next item to change, with the item selected changing in the following sequence:

→ Day → Month → Year → Hour → Minute → Finish Adjustment ←

⑤ Repeat steps ② and ③ to set all items. After the minute setting has been performed, press the DATE/TIME SELECT button, and items will cease blinking, and the clock will resume normal function.

Date/time recording

The date, time, or date and time can be displayed and recorded according to the selected mode. Press the DISPLAY SELECT button to cycle through the modes in the following order:

→ Date/Time display → Date display → Time display → AUTO DATE record reserve → On-screen display →

- When the auto-date-record function is selected, "AUTO DATE" appears in the viewfinder, until recording begins. As long as this function is chosen, the date and/or time will be automatically displayed and recorded for 5 seconds following the first pressing of the recording start/stop button after the power is turned on.
- AUTO DATE record reserve indication will cease to be displayed, if the DISPLAY ON/OFF button is set to OFF.

Date/time recording indications

Date/time display	Date display	Time display	AUTO DATE record reserve	
31.12.89 23.59	31.12.89	23.59	AUTO DATE Auto date record reserved	31.12.89 Auto date record executed

PLAYBACK

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The GR-S707E permits playback of recorded S-VHS-C and VHS-C video cassettes.
For connections refer to pages 34 and 35.

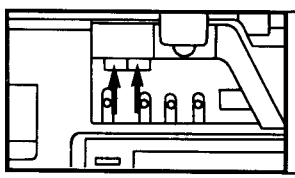
Preparations
- With a television equipped with audio/video (or S-VIDEO) input connectors, set the television's TV/VIDEO switch to VIDEO.
- With a regular television receiver, set the aerial select switch of the RF-V3E RF unit to VIDEO and TV receiver's channel selector to your video channel specified AV channel.

1 Connect a power supply unit.
(Battery or AC operation: see page 19.)

2 Slide the POWER switch to ON.

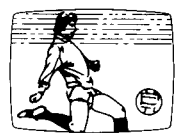
3 Insert a pre-recorded S-VHS or VHS cassette.

4 Press the PLAY button. Playback will start.



Tracking adjustment
If noise bars appear on the screen, press either TRACKING control button to minimize noise.

Refer to the LCD indicator



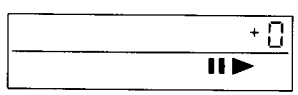
STILL PLAYBACK

Press the PAUSE/STILL button ⓫ during playback. The picture will stop on the screen.
- After about 5 minutes of still playback, the unit enters the Stop mode automatically for tape protection and switches itself off.
- To release the Pause/Still mode, press the PLAY button.
- In the Pause/Still mode, each time the PAUSE/STILL button is pressed, the frame will advance.

Notes:
- Noise may appear on the screen during Shuttle Search, still and slow-motion playback. This is not due to any defect of the unit.
- Pictures may become monochrome during Shuttle Search in the LP mode. This is not due to any defect of the unit.
- Audio will be muted during Shuttle Search, Still and Slow-motion play back.

SLOW-MOTION PLAYBACK

While in the Play of Fast-Speed Search mode, the SLOW button can be pressed anytime to obtain slow-motion playback.
- If noise bars appear on the screen, press either TRACKING control button to minimize noise.



Recorder section LCD

SHUTTLE SEARCH

① **Fast-speed search in the forward direction**
Press and quickly release the FF button ⓭ in the Play mode. Playback will be speeded up to 7 times normal speed.

② **Fast-speed reverse search**
Press and quickly release the REW button in the Play mode. The tape will be played back in the reverse direction at 7 times normal speed.

Note:
- For briefer fast-speed searching, keep the Shuttle Search button pressed for more than 2 seconds; when you release the button, normal playback resumes.

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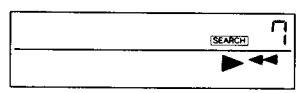
VARIABLE-SPEED SEARCH FUNCTION

Variable-Speed Search is possible in either forward or reverse direction from the Play mode.

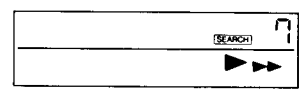
To search in the reverse direction:
- First press the REW button while in the Play mode to start fast-speed searching at 7 times normal speed in the reverse direction (7X).



Recorder section LCD

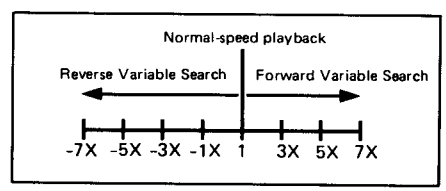
- Press the TRACKING "–" button to reduce searching speed –from 7X to 5X, from 5X to 3X, etc. While searching at a slower speed, press the TRACKING "+" button to increase searching speed to 7 times normal in the reverse direction.

To search in the forward direction:
- First press the FF button while in the Play mode to start fast-speed searching at 7 times normal speed (7X).

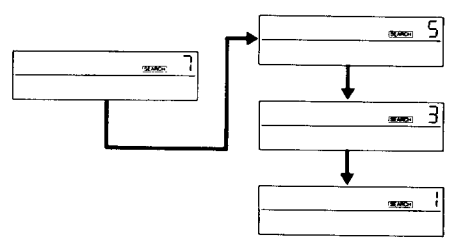


Recorder section LCD

- Press the TRACKING "–" button to reduce searching speed – from 7X to 5X, from 5X to 3X, etc. While searching at a slower speed, press the TRACKING "+" button to increase searching speed to 7 times normal in the forward direction.



The following indications appear in the recorder section LCD in both forward and reverse Search modes.



CONNECTIONS FOR PLAYBACK

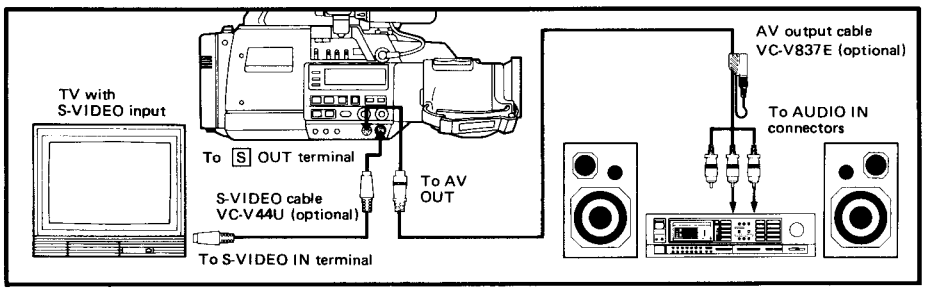
ENGLISH

① Connection to a television equipped with S-VIDEO input connector

For this situation, use the S-VIDEO cable and the AV output cable.

To a stereo system

●With this set-up, monitoring while camera shooting is also possible.



Procedure

- ●Connect the [S] OUT terminal of the GR-S707E to the S-VIDEO IN terminal of the S-VIDEO-equipped TV receiver.
- ●Connect the AV OUT of the GR-S707E either to the TV receiver's AUDIO IN connectors or to the AUX IN or TAPE MONITOR terminals of an amplifier.
- ●Connect the AV OUT of the GR-S707E to the A/V socket of the S-VIDEO equipped TV receiver.
- ●Set the VIDEO OUT select switch to "Y/C".

Application

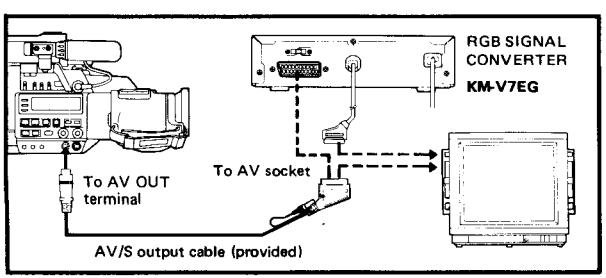
- ●With this setup, you can enjoy prerecorded S-VHS Hi-Fi tapes in stereo while viewing them on an S-VIDEO-equipped TV receiver.
- ●If the TV receiver is not equipped with a 4-pin S-VIDEO connector, this stereo-system connection is not possible.

CAUTION:

- ●The GR-S707E has a dynamic range of more than 80 dB in the hi-fi audio mode. It is recommended that you check the maximum level if you are going to listen to the hi-fi audio signals through a stereo amplifier. A sudden surge in speaker input may cause speaker damage.
- ●Some speakers and televisions are specially shielded to prevent television interference. If neither are shielded, do not place the speakers adjacent to the TV set, otherwise the video playback picture will have interference.

② Connection to a television equipped with audio/video input connectors

- ●Simply connect the AV OUT terminal of the GR-S707E either directly to the VIDEO and AUDIO IN connectors of the television using the provided AV/S output cable, or to a KM-V7EG RGB signal converter (optional) and the RGB signal converter to the RGB-compatible AV IN connector of the television.
- ●Set the VIDEO OUT select switch as required: either to "CVBS" (with the direct TV connection) or to "Y/C" (with the RGB converter connection).



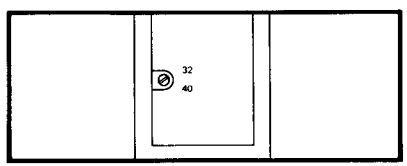
Note:

The KM-V7EG (optional) enables the separated Y/C signal to be converted into an RGB signal so the superb quality of Super VHS pictures is available.

③ Connection to a television not equipped with audio/video input connectors

For this situation, use the RF-V3E RF unit.

1. Remove the aerial cable from the TV receiver.
2. Connect the aerial cable to the ANTENNA IN terminal of the RF unit.
3. Connect the RF OUT terminal of the RF unit to the aerial terminal of the TV receiver using the provided aerial cable.
4. Connect the VIDEO/AUDIO INPUT cable of the RF unit to the AV OUT connector of the GR-S707E.
5. Adjust the RF converter output channel according to your VIDEO CHANNEL.

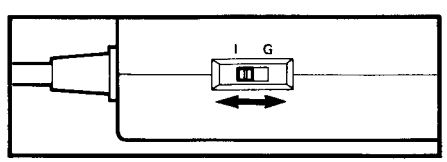


●RF converter channel adjustment screw

The RF unit permits playback of video and audio recordings through a TV receiver. The signals from the RF unit are viewed through a vacant channel not used for broadcasting in your area. The output frequency of the RF converter has been set to correspond to a broadcast on UHF channel 36. To view playback pictures from the GR-S707E with your TV receiver, tune its specified AV channel to UHF channel 36. If channel 36 is employed for broadcasting in your area, readjust the RF converter output channel to one of the vacant channels between 32 and 40. To make this adjustment, remove the small cap on the back of the RF unit and turn the adjustment screw with a screwdriver to tune in a vacant channel.

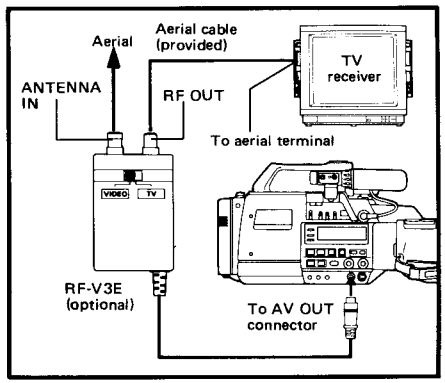
●TV system select switch (I/G)

When you use a TV receiver built to the British PAL standard, shift the system select switch to "I".



PRECAUTIONS FOR RF-V3E (optional)

- ●For exclusive use with the VideoMovie.
- ●Do not disassemble or remodel the RF-V3E.
- ●Do not expose it to strong shocks.
- ●Unplug the connected equipment during lightning storms. (Never touch the aerial cable.)



●RF converter channel adjusting procedure

1. Set the AV channel of the TV receiver to one of the vacant channels.
2. Set the VIDEO OUT select switch to "CVBS".
3. Power the GR-S707E.
4. Put the GR-S707E in the Rehearsal mode (see page 23).
5. Set the VIDEO/TV switch of the RF unit to VIDEO.
6. While monitoring the output signal on the TV screen, turn the RF converter channel adjustment screw so that the monitored picture comes in most clearly.

CAUTION:

To view the GR-S707E recordings with a TV receiver, use a TV receiver having a specified AV channel and employ this AV channel as your VIDEO CHANNEL, otherwise playback may be disturbed with vibrating or bending pictures. AV channels refer to channels exclusively for video playback; because AFC circuits are applied to these channels, the playback pictures can be stabilised. Recent TV receivers have one or more AV channels.

OPERATION

Viewing video cassettes being played back with the GR-S707E

To view video cassettes or to monitor the recording, set the VIDEO/TV switch of the RF unit to VIDEO and the TV channel selector to the channel corresponding to the RF output channel.

Viewing television programmes

Set the VIDEO/TV switch to TV, and the TV receiver will function as usual.

EDITING TECHNIQUES

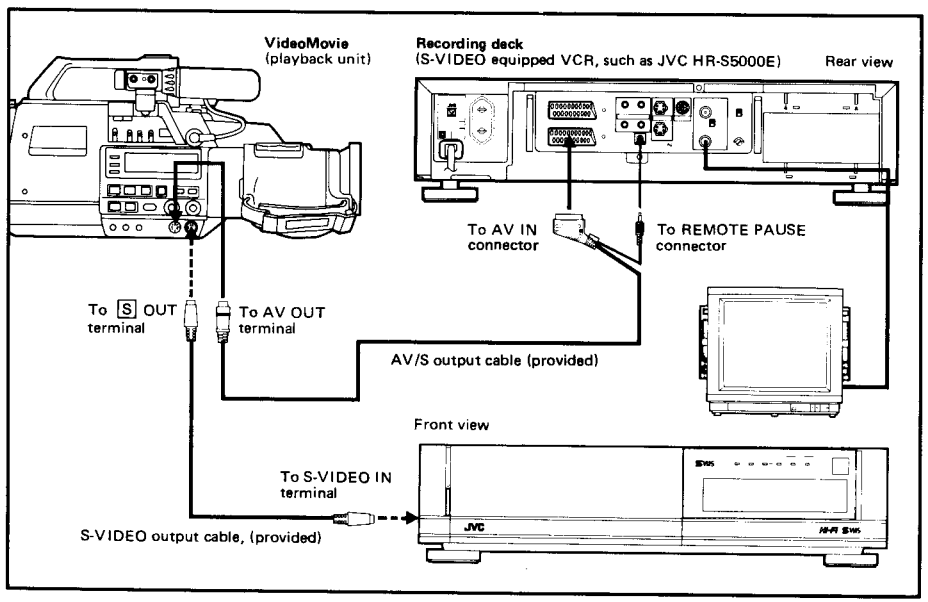
ENGLISH

① Master Edit Control system (Assemble editing) (When using a JVC VCR equipped with a Remote Pause terminal)

This feature functions only when using a designated JVC VCR equipped with a Remote Pause terminal. The Master Edit Control system enables control of the VCR using the GR-S707E's controls, for quality assemble editing without transit-point lags or distortion.

Preparation

- Connect the GR-S707E and the recording deck as in the diagram below.
- Set the VIDEO OUT switch to Y/C or CVBS.
- Turn on both the GR-S707E and the recording deck.
- Correctly insert the appropriate cassettes into the GR-S707E and the recording deck.



1 Engage the recording deck's Record-Pause mode. (At this time, the tape in the deck winds backward 1.3 seconds.)

2 Set the DUBBING MODE switch ❷ of the GR-S707E to ON.

3 Engage the GR-S707E's Play mode ⓴ to locate the edit-out point on the tape. When this point is reached, press PAUSE/STILL ㉑ .

4 Press RESET ⓲ on the GR-S707E then press MEMORY ⓱ . "MEMORY" and "+00M 00S" will appear on the LCD panel.

5 Press REW/SHUTTLE SEARCH to locate the edit-in point. When it is reached, engage the Still mode.

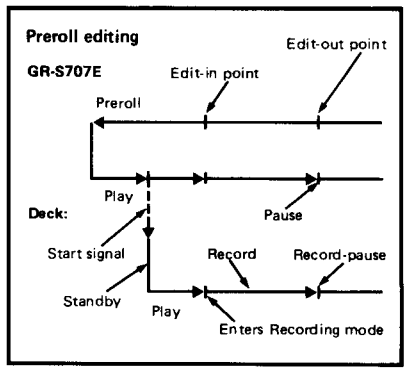
Note:
There are some VCRs which are not compatible with Master Edit Control. For these units use the VCR's pause control to perform edit-in or edit-out functions.

6 Press EDIT on the GR-S707E to start editing.

- At this time, the GR-S707E and the recording deck carry out the following procedure automatically:
  1) The GR-S707E prerolls the tape for 5 seconds then starts playback to stabilize the tape run.
  2) After the GR-S707E has played back for 3.7 seconds, it sends a command signal to the recording deck. The deck then starts playback together with the GR-S707E for 1.3 seconds.
  3) When the GR-S707E's tape reaches the edit-in point, the deck starts recording in synchronization with it.

7 When the GR-S707E's tape reaches the edit-out point (counter reading of "+00M 00S"), the VideoMovie enters the Still mode and the recording deck enters in the Record-Pause mode automatically.

- Repeat above steps as required.
- When the tape reaches the preset edit-out point during the dubbing operation, it may stop slightly before or after the designated point on the tape.



② Insert Editing

Insert editing means recording a new scene into a section of prerecorded tape so that a part of the original recording can be replaced with a new sequence without excessive picture distortion at the edit-in and edit-out points. In the Insert Edit mode, the original audio on the normal audio track remains unchanged.

1 Locate the desired edit-out point on the VideoMovie's tape and press PAUSE/STILL.

2 Press RESET to obtain a "+00M 00S" reading, then press MEMORY to obtain an "MEMORY" indication on the LCD.

3 Press REW/SHUTTLE SEARCH to rewind the tape a little beyond the beginning of the scene your wish to insert.

4 Press PAUSE/STILL exactly at the beginning of the scene you wish to insert.

5 While holding INSERT pressed, press PAUSE/STILL. The INSERT indicator appears and the VideoMovie enters the Insert Edit mode with the scene at which the VideoMovie is aimed appearing on the screen for monitoring.

6 Press Recording start/stop to insert the new sequence.

7 When the counter reading of "+00M 00S" is reached, insert editing stops automatically and the VideoMovie enters the Playback mode.

Notes:

- When the tape reaches the preset edit-out point during the editing operation, it may stop slightly before or after the designated point on the tape.
- For inserting (replacing) the normal sound only, see "④Audio Dubbing" on page 38.

ENGLISH

③ Tape Dubbing

In order to perform simple dubbing of an entire tape, proceed as follows.

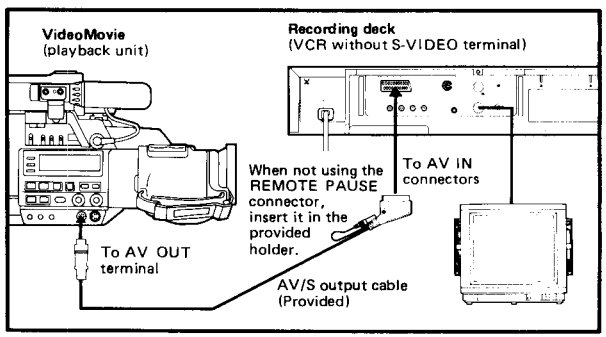
Dubbing to a second recorder

Preparation

- Make connections according to the diagram below.
- Turn on all components' power.
- Correctly insert the appropriate cassettes.
- Set the DUBBING MODE switch to ON.

1 Engage the connected recorder's Record-Pause mode, and press the GR-S707E's PLAY and PAUSE/STILL buttons together to engage its Pause mode.

2 Press the GR-S707E's PLAY button and engage the connected recorder's Record mode to start dubbing. (The GR-S707E starts playback; the recorder starts recording.)


VideoMovie
(playback unit)
Recording deck
(VCR without S-VIDEO terminal)
When not using the REMOTE PAUSE connector, insert it in the provided holder.
To AV IN connectors
To AV OUT terminal
AV/S output cable (Provided)

3 To edit out unwanted material, engage the recorder's Record-Pause mode.
- If using with a JVC VCR equipped with a remote pause terminal, perform as follows;

1) Make connections the diagram on page 36.
2) Engage the connected recorder's Record-Pause mode.
3) Press the EDIT button of the VideoMovie. The deck's recording begins in synchronization with the GR-S707E's playback start.

④ Audio Dubbing

Audio dubbing means recording a new soundtrack on a pre-recorded tape, i.e., replacing the original sound with new audio material.

Precautions

- Tapes with their safety tabs removed cannot be audio dubbed. Reseal the safety tab slot to perform the dubbing.
- If whistling or howling is heard during audio dubbing, reduce the TV volume or move the mike farther away from the TV.
- When dubbing from a microphone, connect the microphone to the VideoMovie.

1 Press PLAY to start playback of the tape.

2 Press REW/SHUTTLE SEARCH and FF/SHUTTLE SEARCH to locate more quickly the place on the tape you want audio dubbing to begin.

3 Press PAUSE/STILL at the exact beginning point for aduio dubbing.

4 While pressing AUDIO DUB, press PAUSE/STILL to enter the Audio Dub Standby mode.

5 When you are ready with the new audio material, press PLAY to begin audio dubbing.

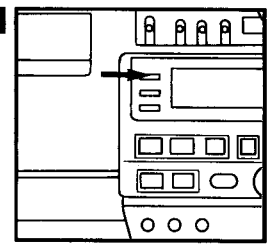
6 To stop audio dubbing, press PAUSE/STILL to engage the Audio Dub Pause mode, or press STOP.

TIME COUNTER FUNCTIONS

ENGLISH

Remaining Tape Time Indicator

The tape counter is switchable to the remaining tape time indicator.

1 

Press the COUNTER/REMAIN button to obtain the Remaining Tape Time mode.

2 The remaining tape time is displayed on the LCD as shown.

With an SE-C30 tape in the LP mode:

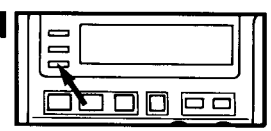
60 MIN → 50 MIN → 40 MIN → 30 MIN → 20 MIN → 15 MIN
0 MIN ← 1 MIN ← 2 MIN ← 3 MIN ← 4 MIN ← 5 MIN ← 10 MIN

Notes:

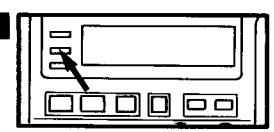
- Remaining tape time is calculated when "-MIN" indication appears on the LCD.
- During recording, the remaining tape length is calculated in reference to the recording mode selected with the REC MODE select switch.
- The indicated remaining time is approximate. The time required to calculate the remaining tape length and the accuracy of that calculation may vary according to the type of cassette tape.

Time Counter Memory Function

The GR-S707E incorporates a counter memory mechanism which facilitates locating specific tape segments.

1 

Press the RESET button to reset the counter to "+00M 00S".

2 

Press the MEMORY button. The "MEMORY" mark will appear.

3 After recording or playback, press the STOP button, then the REW button. The tape will automatically stop at a counter reading of around "+00M 00S".

4 Press the PLAY button to start playback.

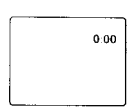
Notes:

- The counter memory function is effective in the Fast Forward mode as well.
- To cancel the memory function, press the MEMORY button. "MEMORY" will disappear.
- When the power supply unit is disconnected, all indications on the display disappear and the counter memory function is cancelled.

One-Shot Time Counter Function

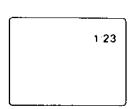
This feature provides a recording time viewfinder indication in minutes and seconds for each scene as it is being shot.

1 Set the ONE-SHOT TIME COUNTER switch to ON. The One-Shot Time Counter indication appears in the viewfinder.



2 When the recording start/stop trigger switch is pressed, recording starts and the counter starts advancing in one-second intervals.

3 When the recording start/stop switch is pressed again to enter the Recording Standby mode, the counter stops and displays the duration of the just-recorded segment.



- If recording is resumed, the counter is automatically reset to 0:00 and counting continues for the duration of the next shot.
- To remove the One-Shot Time Counter indication from the viewfinder screen, set the ONE-SHOT TIME COUNTER switch to OFF.

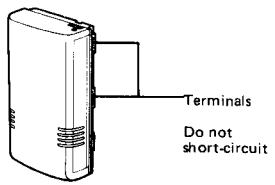
CHARGING THE BATTERY PACK

ENGLISH

To charge the battery pack, use the exclusive AC power adapter/battery charger AA-V6EG (provided/optional) or car battery charger BH-V5E (optional).

A WORD ON THE EXCLUSIVE BN-V66RU/V77RU BATTERY PACKS

The BN-V66RU/V77RU are nickel-cadmium batteries. Give attention to the following to make the most of their characteristics.



Temperature ranges:
The recharging time is based on a room temperature of 20°C.
The lower the temperature, the longer the recharging time.

For charging:	10°C to 35°C
For operating:	0°C to 40°C
For storing:	-10°C to 30°C

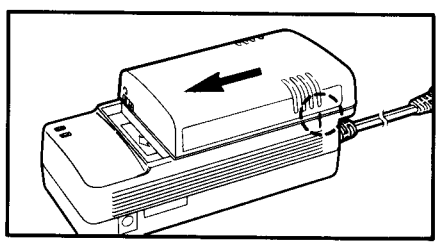
The battery pack has been kept in the uncharged state for shipment. Therefore, before use, charge it.
BE SURE TO CAREFULLY READ THE CAUTION ATTACHED TO THE BATTERY PACK.

Charging procedure

Charging time

BN-V66RU 70 min.	BN-V77RU 80 min.

- The charging time differs depending on the ambient temperature and the condition of the battery pack.



1. Connect the AC power cord to a wall outlet. (The POWER indicator will light.)
2. Align the marks on the battery pack and adapter.
3. Slide the battery pack in the direction of the arrow until it locks in place.
4. When charging is completed, the CHARGE indicator that is red turns to green.

PRECAUTIONS

- If used near a radio, the provided AA-V6EG AC power adapter/battery charger may interfere with reception.
- Prevent inflammables, water and metallic objects from entering the unit.
- Do not disassemble or modify the unit.
- Do not apply shocks to the unit.
- Do not subject the unit to direct sunlight.
- Avoid using the unit in extremely hot or humid places.
- Avoid using the unit in places subject to vibrations.

Note:
The optional BH-V5E Car Battery Charger can charge a battery pack from a car battery. For details refer to the instructions of the BH-V5E.

Recording time for the GR-S707E

BN-V66RU: 40 min.	BN-V77RU: 60 min.

- The recording time per charge is influenced by the duration of recording standby, frequency of zooming, etc. It is safer to have spare battery packs.

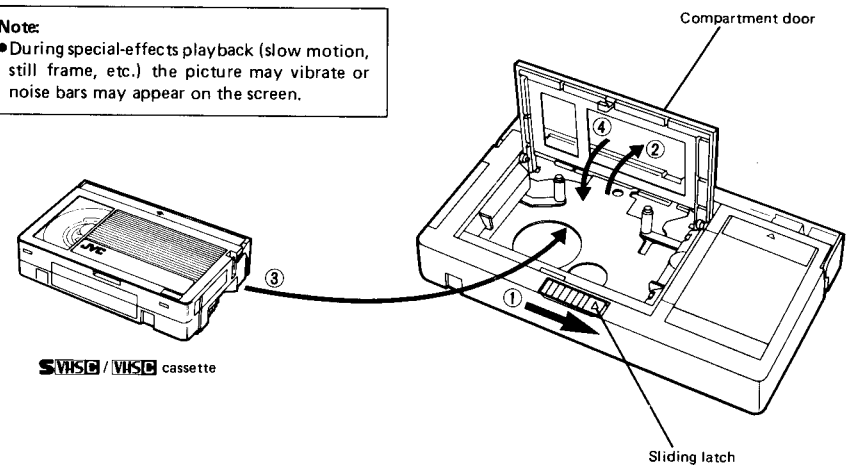
USING THE CASSETTE ADAPTER (provided)

ENGLISH

By using the provided Cassette Adapter, an S-VHS or a VHS compact video cassette recorded with this Video-Movie can be played back with any deck-type S-VHS video recorder (deck-type VHS video recorders can play back only cassettes recorded in VHS). Also, either an S-VHS or a VHS compact video cassette installed in the cassette adapter is fully compatible for both recording and playback on any deck-type S-VHS or VHS video recorder.
Note: Only compact video cassette tapes maked S-VHS C or VHS C can be used with the Cassette Adapter.

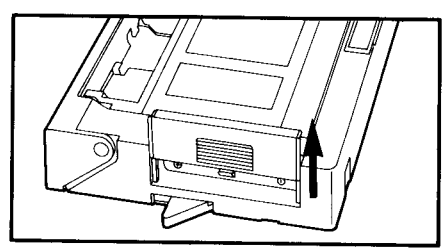
- **C-P5U Cassette Adapter**
  The battery-operated C-P5U performs tape loading and unloading automatically.

Note:
- During special-effects playback (slow motion, still frame, etc.) the picture may vibrate or noise bars may appear on the screen.



Inserting the battery into the cassette adapter

Remove the battery cover by sliding it up.
Install one "R6" battery and reattach the cover.



General Battery Precautions

- When the unit is not functioning even when correctly operated, the battery is exhausted. Replace it with a fresh R6 battery.
- Use only R6-size batteries in the unit. Please make note of the following rules for battery use. When misused, batteries can leak or explode.

1. Insert the batteries correctly according to the diagram inside the battery section.
2. Do not use old and new batteries together.
3. Do not use two different kinds of batteries. Although sizes may be the same, voltages may differ.
4. Do not expose batteries to excessive heat as they can leak, or explode. Do not dispose of batteries in a fire.
5. Remove batteries from the unit if it is to be stored for an extended period to avoid battery leakage which can cause malfunctions.

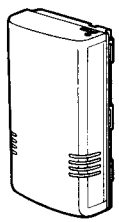
SYSTEM FLEXIBILITY

ENGLISH

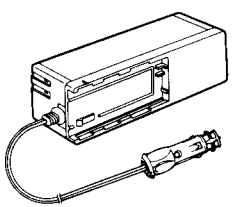
For maximum enjoyment, make the most of the provided or optional accessories depending on the situation.

●High-capacity battery pack
BN-V66RU
Page 19

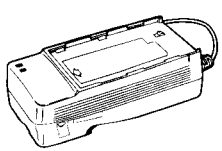
●Super-high-capacity battery pack
BN-V77RU
Page 19



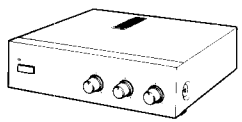
●Car battery charger BH-V5E
Pages 19 and 40
Use to charge the battery pack, or power the GR-S707E using a car battery.



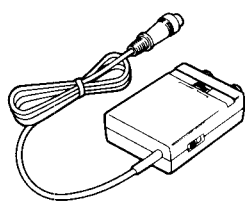
●AC power adapter/battery charger AA-V6EG
Pages 19 and 40
Use to power the GR-S707E with household AC current or charge the battery pack.



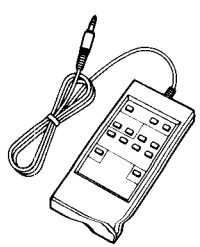
●RGB signal converter KM-V7EG
Page 34



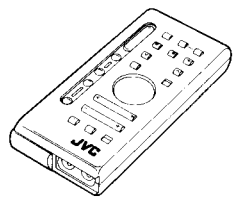
●RF unit RF-V3E
Page 35
Use to connect the GR-S707E to a regular TV receiver (with provided antenna cable) for playback.



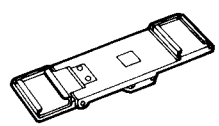
●Remote control unit RM-V15U
Page 45
Controls VideoMovie's VCR functions from a distance.



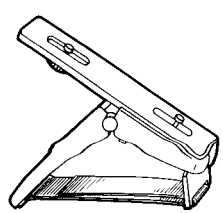
●Character generator
CG-P50E
Page 44
Allows superimposition of titles, dates and lap time during recording.



●Shoe adapter CU-V410U
Page 44
Use to attach microphone, character generator, etc.

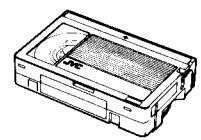


●Shoulder frame CU-V430U
Page 44
Mount on the GR-S707E to facilitate more stable on-shoulder operation.

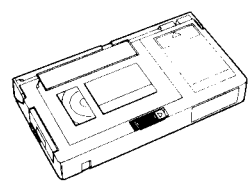


ENGLISH

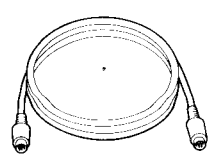
●Compact video cassette
SE-C30
Page 5
Allows 30 minutes of recording and playback in SP mode, and 60 minutes of recording and playback in LP mode.



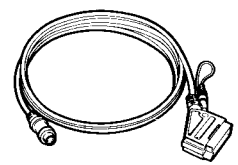
●Cassette adapter C-P5U
Page 41
Enables the SE-C30 compact video cassette to be used with regular S-VHS/VHS machines.



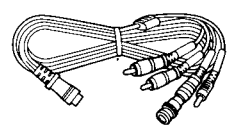
●S-VIDEO cable VC-V44U
Use to connec the GR-S707E to a television set equipped with an S-VIDEO INPUT connector for PLAYBACK, or to an S-VHS recorder for dubbing.



●AV/S output cable VC-V8961SE
Pages 34, 36, 38 and 46
Use to connect the VideoMovie to a TV or VCR equipped with a 21-pin connector for monitoring or dubbing/editing.



●AV output cable VC-V837E
Page 34.

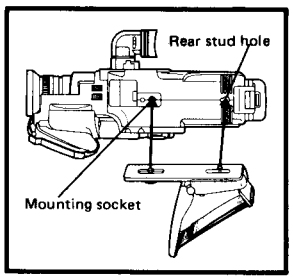


●Carrying case CB-V57U
Use to carry the GR-S707E together with accessories.

USING OPTIONAL ACCESSORIES

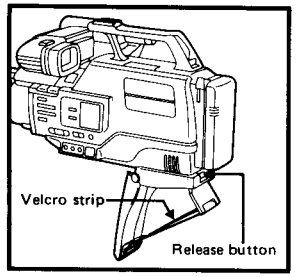
ENGLISH

Use the Shoulder Frame (optional) to facilitate more stable on-shoulder operation.



- Align the mounting screw and stud of the shoulder frame with the VideoMovie's tripod mounting socket and rear stud hole.
- Open the Velcro strip and adjust it to comfortably fit the contours of the shoulder.

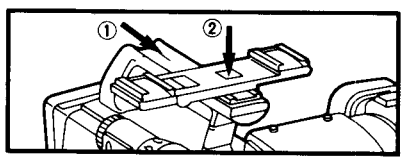
Note:
When the Shoulder Frame is left attached to the VideoMovie (during transportation or storage), be sure to release and close the support flat against the base plate.



Shoe adapter

The shoe adapter allows attaching an external microphone and character generator.

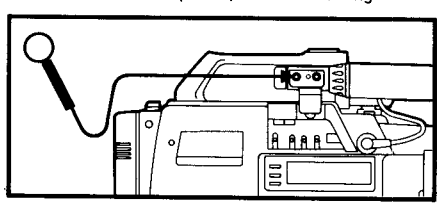
1



Attach the shoe adapter as shown. Slide the shoe adapter while keeping the button ② pressed until it locks.

External microphone

To use another microphone, do the following:

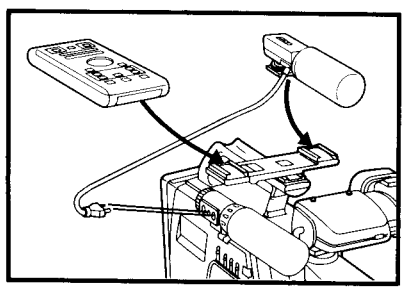


Plug the external microphone's cord into the MIC jack (STEREO or MONO).
- When using the optional wireless microphone unit, plug the cable of receiver unit into the MIC jack.

- **The recorded sound will be:**

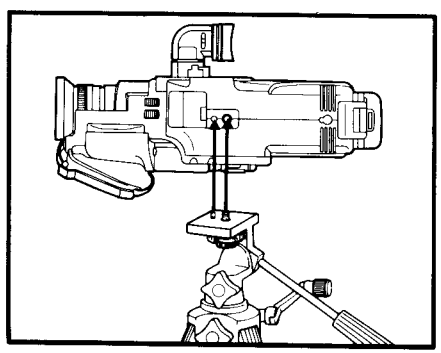
Microphone	Recorded soundtrack
• Monaural mike connected to "STEREO"	• L-channel only
• Monaural mike connected to "MONO"	• L & R channels (mono)
• Stereo mike connected "STEREO"	• L & R channels (stereo)

2



Attach the external microphone and/or character generator.

Tripod mounting

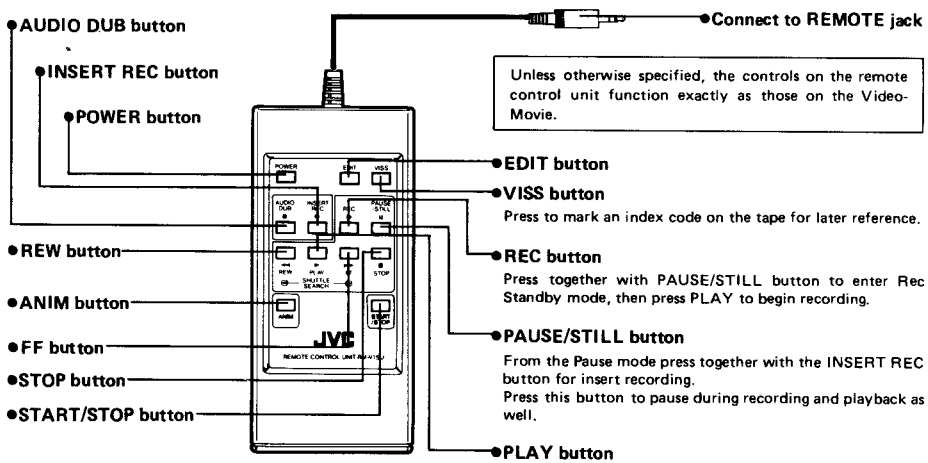


Align the screw and camera direction stud of the tripod with the camera's tripod mounting socket and forward stud hole, and firmly tighten the screw.

ENGLISH

RM-V15U Remote Control Unit

The remote control unit RM-V15U (optional) permits VCR functions to be controlled from a distance.



Unless otherwise specified, the controls on the remote control unit function exactly as those on the VideoMovie.

•VISS button
Press to mark an index code on the tape for later reference.

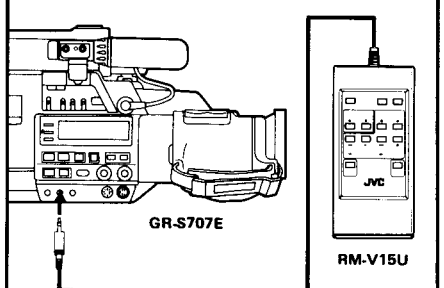
•REC button
Press together with PAUSE/STILL button to enter Rec Standby mode, then press PLAY to begin recording.

•PAUSE/STILL button
From the Pause mode press together with the INSERT REC button for insert recording.
Press this button to pause during recording and playback as well.

•PLAY button
Press for playback. To enter Rec mode, press together with REC button.

Note:
The Rehearsal mode cannot be engaged using this unit.

Connecting the remote control

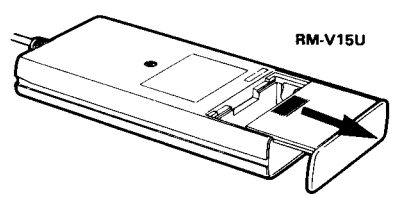


- Plug the remote control cable of the remote control unit into the remote connector on the VideoMovie.

Precautions
- Avoid violent shocks, especially take care not to drop the unit.
- Take care not to allow liquid to spill into the unit.
- Do not place heavy objects on the unit.
- Avoid leaving the unit in places subject to direct sunlight or extremely high temperatures.

Installing the batteries

1. Slide the battery compartment cover on the rear of the unit in the direction of the arrow.



2. Insert 2 "R6"-size batteries (provided) in the correct directions into the battery compartment.
3. Replace the cover.

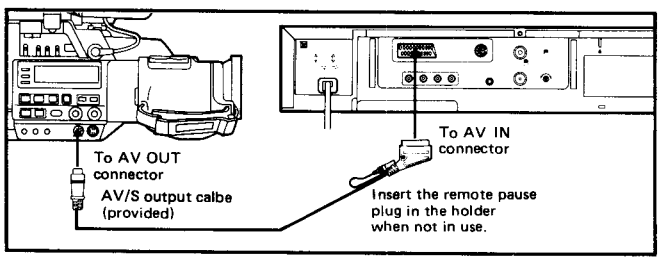
USING THE GR-S707E AS A VIDEO CAMERA

ENGLISH

For continuous documentation of longer events, the GR-S707E can be used as an independent video camera in combination with either a deck-type or portable video recorder.

① Using a recorder not equipped with a remote pause terminal

- Connect the AV OUT connector of the GR-S707E to the AUDIO and VIDEO IN connectors of the video recorder using the provided AV/S output cable VC-V8961SE.


To AV IN connector
To AV OUT connector
AV/S output calbe (provided)
Insert the remote pause plug in the holder when not in use.

Operation

1. Press the MONITOR button. The camera output signal is now available via the AV/S output cable.
2. Put the connected recorder in the Record mode. Recording will start. Tape start/stop should be controlled with the recorder's buttons.

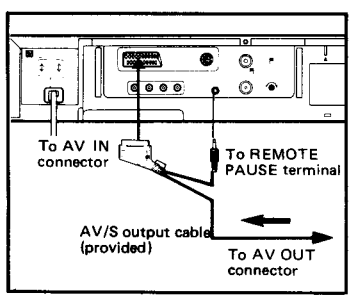
Note:

- In this configuration, it is possible to obtain a continuous recording and an edited-out recording of the same event simultaneously, because the GR-S707E's start/stop button only controls the tape inside the VideoMovie itself while the tape loaded in the connected recorder continues running. To record on the GR-S707E's tape, follow the same recording procedure as described before: press REC and the recording start/stop button.

② Using a recorder equipped with a remote pause terminal

For a JVC recorder with a remote pause terminal

- Connect the AV OUT connector of the GR-S707E to the AUDIO and VIDEO IN connectors and remote pause terminal of the video recorder using the provided AV/S output cable VC-V8961SE.



Operation

1. Press the MONITOR button.
2. Put the connected recorder in the Recording Standby (Record-Pause) mode.
3. Press the recording start/stop button of the GR-S707E to start recording.

Notes:

- To record on the GR-S707E's tape as well, press the REC button and then the recording start/stop button.
- Power is not supplied to the GR-S707E from the connected VCR. Independent power supply is required for both the GR-S707E and the VCR.
- If you stop recording by pressing the GR-S707E's recording start/stop button, the connected VCR also stops in the Pause mode. However, the pause command signal is not delivered to the connected VCR in the following cases and, consequently, the VCR will start automatically:
  (1) When the GR-S707E is switched off or its battery becomes discharged.
  (2) When the cable is disconnected.
  Therefore, before replacing the battery or tape for the GR-S707E, put the connected VCR either in the STOP or REC LOCK mode.

SUPPLEMENTAL INFORMATION

ENGLISH

What is "colour temperature"?

Light is composed of various colour components in different proportions. A relationship exists between the temperature of a light source and the colour components of the emitted light; as the temperature rises, the colour of the light varies from red, orange, yellow, white to blue in that order. "Colour temperature" is a value that expresses differences in colour among light sources, measured in Kelvin degrees. Bluish light has a higher colour temperature than reddish light.

What is "white balance"?

Making the colours look natural on TV is what white balance is all about. Because a camera is not as adaptable as the human eye, if a light source is reddish, white subjects in that light are recorded as reddish. White balance adjustment is performed to compensate for colour temperature variations of light so that whites are reproduced as white. Correct white balance makes all other colours correct. The GR-S707E can perform automatic white balance adjustment. However, if illumination is insufficient, white balance adjustment cannot be performed. To obtain correct colours therefore, sufficient illumination is essential.

What is "illuminance"?

"Illuminance" (also called 'luminance') is the intensity or brightness of light, expressed in lux The GR-S707E is designed to provide best pictures under the conditions of a 700-lux illuminance, although shooting is possible all the away down to 8 lux. To obtain good pictures in very bright light, the use of an ND (neutral density) filter is recommended (See chart on this page.)

How to get good color pictures

The simplest way is to provide sufficient lighting (close to the camera's reference illuminance) and accurately adjust the camera to the colour temperature of that lighting. If light sources of different colour temperatures are used together, accurate white balance adjustment is very difficult. For example, if natural light is mixed with artificial light, which is likely to occur next to windows, correct colours of the subject are difficult to obtain. It is recommended in such cases that curtains in the room be closed to shut out light from outside. Also, when artificial lighting devices are used, they should all have the same colour temperature. For example, it is recommended that incandescent or halogen lamps not be used together with fluorescent lighting.

Colour temperatures of various artificial lighting

Type of illumination		Colour temperature
Tungsten lamp for home use		2800 K
Tungsten lamp for photographic use		3200 K
Quartz-halogen lamp		
Blue lamp for photographic use		5000 K
Fluorescent lamp	Warm white	3500 K
	White	4500 K
	Daylight type	6500 K

Illuminance chart

- The values on this chart are approximated to give you a rough reference.

	Unit: Lux (fc)	
ND filter desired	100,000	• Clear sky, mid-day, under sunlight (100,000)
		• Clear sky (10:00 a.m.) under sunlight (65,000)
		• Clear sky (3:00 p.m.) under sunlight (35,000)
		• Cloudy sky (mid-day) under sunlight (32,000)
		• Cloudy sky (10:00 a.m.) under sunlight (25,000)
Range for practical use	10,000	
		• By the window during the afternoon (3,500)
	2,000	• Cloudy sky (one hour after sunrise) (2,000)
	1,000	• Clear sky (one hour before sunset) (1,000)
	600	• Counters at department stores (500 – 700)
	500	• Bowling center (500)
		• Office under fluorescent light (400 – 500)
		• Library (400 – 500)
		• Direct light of a flashlight at 1 m distance (250)
Lighting desired	100	• Streetlights at night (150 – 200)
	80	
	Minimum lighting for an object	
	15	• Cigarette lighter (at a distance of 30 cm) (15)
	10	• Candlelight (at a distance of 20 cm) (10 – 15)

IN CASE OF DIFFICULTY

ENGLISH

What may initially appear to be trouble is not always a real problem. Make sure first . . . .

Symptoms	Check points
Power	
No power is supplied	●Is the battery pack correctly installed? ●Is the battery pack charged? ●Is the power supply unit correctly connected? ●Is the POWER switch of the connected AC adapter set to ON?
Recording	
Recording is impossible.	●Check to see if the cassette safety tab is in place. See page 5.
Picture colours greatly differ from actual subject colours.	●If in the manual white balance mode, check the setting of the W. BALANCE button.
No sound is recorded with an external microphone.	●Is the microphone's switch set to ON? ●If the ALC switch is set to OFF, is the Hi-Fi REC LEVEL control turned to its lowest setting?
Recording does not start.	●Have you pressed the REC button first?
Playback	
Tape is running, but no playback picture appears.	●Is the TV/VIDEO switch of the RF unit set to VIDEO? ●Is the TV receiver set to your video channel? ●If A/V connection is used, is the TV's VIDEO/TV switch set to VIDEO?
Noise bars appear in the playback picture.	●Use the TRACKING control buttons to reduce noise bars.
Soundtrack on the Hi-Fi audio track cannot be reproduced.	●Is the AUDIO OUT select button set to NORM? – Set it to Hi-Fi.
Playback picture and/or Hi-Fi audio is blurred or interrupted.	●Video heads may be dirty or worn out. For head cleaning or replacement, consult the nearest JVC Service Dealer.
Tape transport	
Tape stops during fast forward or rewind.	●Is the "MEMORY" indication visible in the recorder section LCD? If so, press the MEMORY button to cancel the memory function.
Rewinding or fast forwarding is impossible.	●Check to see if the tape has already been fully wound on one reel or the other.
Other	
No function is available with more than two mode indicators lit.	●If this should happen when using power supply units other than the battery pack, turn their POWER switch on and off. With a battery pack, replace it with another charged one.
Vertical white lines appear when shooting a very bright object.	●This may occur when the background contrasts very much with the object. This is normal.
Picture is blurred in Quick Review or Retake mode.	●Is the SP/LP recording mode select switch properly set?

The GR-S707E is a microcomputer-controlled device. External noise and interference might prevent it from functioning properly. In such cases, first disconnect its power supply unit (battery pack, AC power adapter, etc.); and then reconnect it and proceed as usual from the beginning.

SPECIFICATIONS

ENGLISH

Format : S-VHS / VHS PAL standard with Hi-Fi audio
Power source : DC 9.6 V ⎓
Power consumption : 12 W
Signal system : PAL-type colour signal and separated Y/C signals conforming to PAL standard
Video recording system : Rotary, two-head helical scan system with slant double-azimuth combination video heads
Luminance: FM recording
Colour: Converted sub-carrier direct recording
Conforms to S-VHS standard
Hi-Fi audio recording system : Deep-layer recording system conforming to stereo Hi-Fi VHS standard
No. of audio channels : 2 Hi-Fi audio channels
1 normal audio channel
Cassette : S-VHS-C / VHS-C cassette
Tape speed (SP) : 23.39 mm/sec
(LP) : 11.70 mm/sec
Recording time
Max. (SP) : 30 minutes (with SE-C30 cassette)
(LP) : 60 minutes (with SE-C30 cassette)

VIDEO
Output : 1 Vp-p, 75 ohms, unbalanced (via AV connector)
Input : 0.5 to 2.0 Vp-p, 75 ohms, unbalanced
S/N ratio : More than 43 dB (with Rohde & Schwarz noise meter)

AUDIO
Output : -6 dBs, 1 k-ohm (via AV connector)
Input : -8 dBs, high impedance
Microphone input : -68 dBs, high impedance, unbalanced

Hi-Fi AUDIO
Frequency response: 20 Hz to 20,000 Hz
Dynamic range : More than 80 dB
Wow and flutter : Less than 0.005 % WRMS

Pickup : 1/2" format CCD
Minimum required illumination : 8 lux (at F/1.2)
Illumination range : 8 – 100,000 lux
Lens : F1.2 f = 9 – 72 mm, 8:1 two-speed power zoom lens with auto iris control and macro position, filter diameter 52 mm
Viewfinder : Electronic viewfinder with 0.7" black/white CRT
Selectable high-speed shutter : Switchable (1/250, 1/500, 1/1000 sec.)
Color temperature switching : Switchable (3,200 K/4,500 K/5,500 K)
White balance adjustment : Full-auto/preset standard
Operating temperature : 0°C to +40°C
Operating humidity : 35 % to 80 %
Storage temperature : -20°C to +50°C
Weight : 2 kg (with viewfinder)
Dimensions : 196(W) x 181(H) x 376(D) mm (incl. viewfinder)

AA-V6EG SPECIFICATIONS
Power requirement : AC 110 – 240 V∿, 50/60 Hz
Power consumption : 23 watts
Output : DC 14 V ⎓ 1.1 A (Charge)
DC 9.6 V ⎓ 1.2 A (VideoMovie)
Charging system : Constant current, peak detection, timer controlled
Dimensions : 150(W) x 42(H) x 69(D) mm
Weight : Approx. 380 g

C-P5U SPECIFICATIONS
Type : VHS cassette adapter
Dimensions : 188(W) x 25(H) x 104(D) mm
Weight : 240 g
Accessory : "R6"-size battery x 1

Provided accessories:
AC power adapter/battery charger AA-V6EG
Cassette adapter C-P5U
Cassette tape SE-C30
Battery pack BN-V66RU
AV/S output cable VC-V8961SE
Stereo earphones
Shoulder strap
Lens cap (white balance cap)
Battery for clock operation CR2025

For optional accessories, refer to pages 42 and 43

Specifications shown are for SP unless otherwise specified.
Design and specifications subject to change without notice.